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ABSTRACT

The purpose of this curriculum guide is to prepare laboratory aide instructors to teach behind-the-wheel instruction to beginning drivers. The guide is designed with 12 specific instructional lessons to be conducted in conjunction with the scheduled driver education program. Each lesson follows a typical format that includes the following sections: (1) lesson title, (2) time (estimated scheduled hours), (3) lesson overview, (4) lesson objective, (5) instructional concepts, (6) suggested content outline, (7) learning activities, (8) instructional resources, and (9) candidate resources. Appended is a list of films and filmstrips that can be used in the course. (LRA)

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DRIVER EDUCATION
CURRICULUM GUIDE

Laboratory Aide Instruction
Curriculum Guide

CE 025 229

Ohio Department of Education
Division of School Finance
Driver Education Section

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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FOREWORD

The development of effective driver education programs for Ohio youth continues as a significant concern of the State Board of Education. Through funding provided by the National Highway Traffic Safety Administration, the Ohio Department of Education is developing a series of curriculum guides in driver and traffic safety education, the most recent being the current guide on Laboratory Aide Instruction.

An extremely important component in a successful driver education program is the quality of training that each staff member receives. With the increasing reliance on laboratory aides for the behind-the-wheel phase of Ohio's instructional program, thorough training in the best methods of instruction is imperative.

Several factors are responsible for the increasing use of laboratory aides in many programs. The required student teacher ratio for the behind-the-wheel instruction is the most important, however. This phase represents that critical point in each student's education when on-road experience completes a full program of driver and traffic safety. Subsequently, the teacher has more time to devote to the classroom and laboratory phases of instruction.

The Laboratory Aide Instruction Curriculum Guide was developed to assist school administrators in preparing qualified individuals to conduct the behind-the-wheel phase of a driver education curriculum. We trust that this guide will enhance the instruction for complete program effectiveness.

Franklin B. Walter

Franklin B. Walter
Superintendent of Public Instruction

JUN 9 1980

PREFACE

The Ohio Traffic Safety Education Center (OTSEC), a project of The National Center for Research in Vocational Education at The Ohio State University, is funded by the Ohio Department of Highway Safety, Governor's Highway Safety Program, and monitored by the Ohio Department of Education, Division of School Finance, Driver Education Section. OTSEC was organized to provide assistance to the citizens and state departments of Ohio in five basic functional areas: research, development, services, education, and dissemination. These areas to a large extent parallel the functional areas of the National Center.

Within the five areas, driver and traffic safety education projects at OTSEC have been broad in scope. They have included such activities as developing driver education curricula for use in public schools, publishing a traffic safety newsletter for distribution throughout the state, developing a driver education information package for local school boards, conducting workshops in motorcycle safety and driver education for the handicapped, and many others.

The outcome of OTSEC's research, development, and education programs has been heightened awareness of driver and traffic safety practices on the part of Ohio's citizens. By furthering this awareness, OTSEC has made and will continue to make a positive impact on traffic safety in Ohio.

Robert E. Taylor

Robert E. Taylor
Executive Director
The National Center for
Research in Vocational
Education

ACKNOWLEDGMENTS

The staff of the Division of School Finance, Driver Education Section, express appreciation to the participants in the Advanced Driver Education Workshop at Wright State University.

This advanced workshop in laboratory aide instruction, sponsored by the Ohio Department of Education with funds made available by the National Highway Traffic Safety Administration, studied the design and selection of behavioral objectives, human factors (learning, perception, risk acceptance, information processing, vision, motivation), current research in laboratory aide instruction, existing instruction units in the United States and Europe, and cost effective traffic safety countermeasures.

At the culmination of this workshop, the following Ohio school teachers and supervisors wrote the first draft of this guide under the direction of Wylie Graham.

John Albert, Jackson
Edsel Ashworth, Dayton
Jim Chamberlin, Springfield
Ted Cully, Coldwater
Gregory Ernst, Cincinnati
Ken Gray, Cincinnati
Marc Goldman, Milford
Clarence Johnson, Ashtabula
Robert McCormick, Dayton
Earnest Sanders, Dayton
Robert Sheehan, Dayton
Dennis Spriggs, West Liberty
Del Stumbo, Dayton
Charles Traister, Fairborn
Ken Truster, De Graff
James Zepernick, Tipp City
James Zink, Fairborn

The Driver Education Section especially acknowledges the expertise and assistance of the following organizations and individuals in the development of the curriculum guide:

RESEARCH AND WRITING

The National Center for
Research in Vocational Education
The Ohio State University
Robert E. Taylor, Executive Director

Dallas G. Ator, Associate Director

Ohio Traffic Safety Education Center
Barbara K. Wright, Project Director

Scot Krause
Staff Writer

FIELD TESTING

L. Barrett Smith, Superintendent
Mario Piastrelli, Supervisor
Parma City Schools

Conrad Ott, Superintendent
Ed Batman, Supervisor
Akron City Schools

Ralph Gillman, Superintendent
Jack Harr, Supervisor
Summit County Schools

R. G. Drage, Superintendent
Larry Kelly, Supervisor
Stark County Schools

CRITICAL EVALUATION

James Brennan
Berea City Schools

Wylie T. Graham
Wright State University

Karen Kimmel
National Center for Research
in Vocational Education

CREDITS

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PROGRAM OF TRAINING FOR LABORATORY AIDE INSTRUCTORS IN DRIVER EDUCATION

Purpose of the Program

The purpose of the program is to prepare laboratory aide instructors to teach behind-the-wheel instruction to beginning drivers.

The purpose is achieved when candidate instructors meet the general objectives that follow.

Candidates must know:

- The content of the Ohio high school driver education program.
- The use of a variety of instructional methods to achieve the objectives of driver education.
- The need for sequencing instructional experiences to prepare safe and efficient drivers.

Candidates will:

- Demonstrate safe driving performance.
- Plan effective laboratory instructional activities to teach beginning drivers safe and efficient driving techniques.
- Demonstrate effective on-street instruction.
- Evaluate student driving performance.

Laboratory Aide Instructor Requirements

This section identifies the basic requirements for becoming a qualified laboratory aide instructor. According to the *Standards for Driver Education Programs*[1], the laboratory aide instructor shall:

1. Have a high school diploma or a statement of high school equivalence issued by the division of guidance and testing, Ohio department of education,
2. Have a minimum of five years driving experience,
3. Hold a valid driver's license,
4. Have no felony convictions,
5. Have good physical health as evidenced by a health certificate signed by a doctor of medicine in the state of Ohio within six months of the time of application,

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[1] *Standards for Driver Education Programs*. Rule 3301-81-04 (B). Columbus, Ohio: Ohio Department of Education, 1977.

6. Complete a forty-hour driver education course prior to preemployment,

   This preemployment course shall be conducted by an educational institution approved by the driver education section, Ohio department of education, and shall include methods of behind-the-wheel instruction.

7. Complete eighty additional hours of inservice instruction during the first two years of employment, forty hours each year,

   The eighty hours of instruction shall be conducted by an educational institution approved by the driver education section, Ohio department of education, and shall include methods of behind-the-wheel instruction.

8. Hold an educational aide permit, valid for one year, issued upon evidence of completion of the forty-hour inservice instruction requirement.

   Individuals meeting the above criteria will be issued an educational aide permit. This permit will be renewed upon written request from the superintendent of the district employing the laboratory aide instructor. The request shall include evidence of completion of the required additional inservice training. These permits will be issued by the division of teacher education and certification, Ohio department of education.

Stipulations for Laboratory Aide Instructors

1. Approved laboratory aide instructors can only conduct behind-the-wheel instruction.
2. Approved laboratory aide instructors may conduct the behind-the-wheel phase of the driver education program only in a school district which has approved the offering of such a phase and the use of said personnel.

Laboratory Aide Selection and Preparation Programs

1. It is the responsibility of the local school district to select personnel to be used as laboratory aide instructors; the candidates must successfully complete the required training outlined before being eligible to conduct state-approved behind-the-wheel driver education instruction.

2. The expense of the training of selected laboratory aide instructors shall be borne by the individual or the local school district. It is imperative that a thorough screening based on the established requirements be given each applicant.

3. The local educational institution which wants to offer a program for the preparation of laboratory aide instructors must make an application to the Ohio Department of Education, Driver Education Section. Successful completion of this special forty-hour preparation program will qualify the laboratory aide instructor candidate for an educational aide permit. The preparation program should reflect the following participation.

   a. Part one of the program should be based on the highway transportation system and the driving task. Primary emphasis on those specific human functions required to drive safely and efficiently will be stressed. Part one should consist of no less than forty hours. Each candidate must teach at least six hours of behind-the-wheel instruction as part of this phase. This guide is designed to meet these requirements.

b. Part two (the second forty hours of inservice instruction) should be designed to prepare each candidate participating in the program with those abilities needed to instruct in emergency and evasive driving situations. The intent of the advanced driving skills instruction is to provide laboratory aide instructors with the techniques to assist them in teaching advanced maneuvers in an actual in-car situation under controlled conditions. Approximately twenty-five hours of combined classroom and in-car skills practice are recommended to adequately complete the instruction. (*The Advanced Driving Skills Curriculum Guide*, Ohio Department of Education, Driver Education Section, is recommended for instruction.) The remaining time should be spent in review of the past year's experiences and the introduction of new instructional approaches.

c. Part three (the third forty hours of inservice) should concentrate on reevaluation of instructional approaches and updating methods of instruction.

Program Organization

Part one, the initial laboratory aide instructor program, is designed to give candidates experience in high school driver education and behind-the-wheel instruction. Candidates are expected to learn the contents of the behind-the-wheel program while being exposed to classroom, simulation, multimedia and multiple-car range experiences if possible. They are evaluated through written and performance tests to determine their acquisition of driver and traffic safety education objectives.

Curriculum Guide Format

The *Laboratory Aide Instruction* curriculum guide is designed with specific instructional lessons to be conducted in conjunction with the scheduled driver education program. It consists of 40 total hours. The lesson format follows:

Unit Format
- Title—Names of the specific topic
- Time—Estimated scheduled hours
- Overview—A brief statement which provides a background and rationale for the unit
- Lesson Objective—A knowledge or performance objective which states the expected learning outcome of the unit
- Instructional Concepts—Ideas, facts, or opinions that relate to specific aspects of the instructional unit
- Suggested Content Outline—An outline of specific information and suggestions for teaching the unit

- Learning Activities—Suggested activities which may be used to supplement the suggested teaching outline
- Instructional Resources—Suggested references and training aids which may be used to assist in attaining the unit objective. In some cases, codes indicating the source from which the material may be obtained is given. A complete listing of these sources is included in the Appendix.
- Candidate Resources—Additional resource materials which may be useful to the candidate.

Handouts and visuals are located at the end of each unit.

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LESSON I: Driver Education and the Laboratory Aide Instructor

Time: 1 Hour

Overview: This unit introduces the concept of using laboratory aide instructors in the driver education program. The primary instructional approaches are instructor presentations and instructor-directed discussions. The unit consists of a short administrative presentation, course overview, and the opening unit discussion on the relation between driver education and the highway transportation system and how it affects the candidates as potential behind-the-wheel instructors.

LESSON OBJECTIVE: The candidate will describe how the complexities of the driving task make it necessary that each young driver is educated through the appropriate instruction, laboratory plans, and driver preparation processes.

Instructional Concepts

1. Driver and traffic safety education programs that are effectively planned, organized, and taught assist in helping young drivers perform safely within the highway transportation system.

2. The operation of a motor vehicle is an important skill, insofar as the threat to human life is concerned.

3. Performing the driving task with the effectiveness needed to avoid traffic accidents demands proper formal preparation.

4. A curriculum that accomplishes the preparation required must be based on those abilities considered dominant in driving.

Administrative Items

- Staff (instructor) introductions
- Candidate introductions and attendance taken
- Facility usage and scheduling
- Discussion of course content outline
- Course requirements and evaluation
  - —40 hours of instruction
  - —at least one-hour evaluation of candidate driving performance
  - —at least four hours of teaching (lesson plans necessary)

Suggested Content Outline	Instructional Resources
1.1 The Highway Transportation System (HTS): The HTS is an important and complex system consisting of numerous driver-machine combinations with a variety of goals that operates in various regulated environments. The safe operation of this system has become one of the nation's leading social and economic problems.	Transparency: HTS (T-1)
1.2 Official Plan for Controlling HTS Safety Problem: The Highway Safety Act of 1966 required each state to have a comprehensive driver education program, as part of the overall highway safety program, to help reduce traffic accidents.	
1.3 Approach for Development of Driver Education Program: The program of instruction is derived from an analysis of motor vehicle operator tasks.	
1.4 Implications for Driver Education: Driving requires social and mental behaviors that should be learned through formal training and supervised experience. From these learning experiences, students develop the set of expectations and judgments upon which sound driving decisions are made. Because of the tremendous variety of traffic situations, a broad type of learning is required.	Slide-Cassette Presentation: *Driver Education Can Do the Job* (ODE)
1.5 General Objective for Driver Education: The basic objective is to develop drivers who will be competent and responsible users of the highways. Point out that competent and responsible use of the highway transportation system is too important to be learned by chance or in a haphazard way.	Transparency: General Objective for Driver Education (T-2)

Learning Activities	Candidate Resources
1.1 Ask the candidates to identify and appraise the mental and physical requirements that individuals must meet to get and keep an operator's license.	Suggested Reading: "Driver Education: Where Does It Belong?" *Journal of Traffic Safety Education*, October, 1977. pp. 7-9.

Suggested Content Outline	Instructional Resources
1.6 Purposes of Driver Education:	Fact Sheet: Objectives of Driver and Traffic Safety Education
A. Assures that new drivers acquire the knowledge and develop the skills for safe and efficient driving.	
B. Assures that new drivers develop a mobility pattern that is conducive to safe and efficient driving.	
1.7 Nature of Driver Education Instructional Methods: Emphasize that time allocations for various methods are necessary for scheduling and administering driver education in a performance-oriented approach.	Transparency: Nature of Driver Education (T-3)
1.8 Multiple Forces Shape the Behavior of Drivers: Personalities are often reflected in the way we drive. In other words, our overt acts reflect our personality and temperament. Although driver education cannot be expected to change the student's style of life, it can change his or her style of driving.	
1.9 What is the Laboratory Aide Instructor?	Transparency: Laboratory Aide Instructor (T-4)

Learning Activities	Candidate Resources
1.6 What is the purpose of driver education? Why should driver education be offered in the school curriculum?	Fact Sheet: Objectives of Driver and Traffic Safety Education
1.8 Ask the question: What are some of the basic forces that you see as being important to driver education that will help shape operator competency and responsibility (examples: family, peers, teachers, driver education)?	

HIGHWAY TRANSPORTATION SYSTEM (HTS)

A SUBSYSTEM OF THE
NATIONAL TRANSPORTATION SYSTEM

MADE UP OF
NUMEROUS DRIVER-MACHINE COMBINATIONS

HAS A VARIETY
OF REGULATED ENVIRONMENTS

IS EXTREMELY IMPORTANT
TO OUR WAY OF LIFE

GENERAL OBJECTIVE FOR DRIVER EDUCATION

TO DEVELOP DRIVERS WHO

WILL BE COMPETENT AND

RESPONSIBLE USERS OF

THE HIGHWAYS

LESSON 1: FACT SHEET

Objectives of Driver and Traffic Safety Education

1. Candidates will be able to recognize and describe the operation of a motor vehicle as primarily a mental and social task involving the interaction of people and vehicles in a rather complex highway transportation system.

2. Candidates will be able to list capabilities and limitations of their own and other vehicles.

3. When driving in the driver education vehicle, the candidate will demonstrate the efficient visual habits of continuous scanning patterns and regular eye checks inside and to the rear of the vehicle.

4. For the various driver education vehicles used, candidates will contrast, through discussion or demonstration, the performance characteristics and optional equipment available. They will, in addition, determine through discussion and demonstration the correct techniques for coping with critical situations.

5. Candidates will define those responsibilities necessary for making decisions relative to the safe and efficient operation of the vehicle on our highways.

6. Candidates will identify ways to prevent various psychological, social and other factors from having an adverse effect on one's ability to perform.

DRIVER EDUCATION APPROACHES

Standard Course:	60 hours (36 hours classroom; 24 hours of BTW) 6 hours driving 18 hours observing
Simulation Method:	In the 60 hour requirement, 12 hours of simulation may substitute for 2 hours of BTW, or observation time, or classroom instruction.
Multiple-Car Off-Street Method:	The number of hours of substitution shall be determined by the Ohio Department of Education.
Comprehensive Method (4-phase):	60 total hours of instruction.
Multimedia Included:	Utilizing the standard 60 hour program, multimedia shall not replace more than 20 hours of classroom instruction.

LABORATORY AIDE INSTRUCTOR

The laboratory aide instructor works with the classroom teachers. Duties and responsibilities include:

1. Providing instruction for students assigned to the driver education automobile.
2. Controlling the learning environment in accordance with the standards of the principal and classroom teacher in charge.
3. Compiling complete and accurate records for students and equipment assigned to his or her classes including reports of accidents.
4. Maintaining the cleanliness of equipment and reporting operational condition as well as any vandalism, damage, or collision.
5. Reporting to parents on the progress of the student driver during and at the conclusion of BTW instruction.
6. Conducting standard road tests for each individual student driver.
7. Assigning a final grade for all BTW student drivers.

LESSON 2: Driving Task: The Highway Transportation System

Time: 2 Hours

Overview: Stress that automobile driving takes place in a system that is complex and extremely important to our way of living. In this complex system the relationship of the driving task to the functioning of the total system needs to be understood.

LESSON OBJECTIVE: The candidate will describe the general nature of the driving task in the complex highway transportation system and the consequences of system failure.

Instructional Concepts

1. The HTS is a complex driver-machine system whose purpose is the safe, efficient, and economical movement of people and goods from place to place.
2. Driving consists of skilled and properly timed actions under varying road and traffic conditions. These actions are based on sound judgments, realistic perceptions, and learned information (past experiences).
3. Traffic accidents and congestion create some of our most serious economic and social problems.
4. The way in which people, vehicles, and the highway environment interact determines how safe and efficient the movement of people and goods will actually be.
5. For efficient operation of the system, highway users must be willing to accept responsibility for their own safety and the safety of others, including use of seat belts and other passenger restraints.

Note: This unit provides the conceptual structure of the instruction by stressing the operator requirements for safe and efficient driving within the overall highway transportation system. The general method employed is a teacher orientation discussion approach. The approach is supported by visual aids.

Suggested Content Outline

2.1 Highway Transportation System Objective:

A. The safe, efficient movement of people and goods from place to place.

B. This objective is compatible with the purpose of high school driver education.

2.2 Driver-Machine Combinations (Components):

A. System components

1. Drivers—over 142,000,000 licensed drivers
2. Vehicles—over 154,000,000
3. Highways—almost 4 million miles of highway (many of which are inadequate) and approximately 43,000 miles of interstate.

B. Components interrelate and interact with each other constantly.

Instructional Resources

A Resource Curriculum in Driver and Traffic Safety Education, pp. 18-21, 73-75.

Driving Task Instruction, pp. 31-47.

Transparency:

System Objective (T-5)

Transparency:

Major Components of the System (T-6)

Suggested Film:

Safety Times Three (General Motors)

Learning Activities

2.1 Ask the candidates to write their own objective for the highway transportation system.

Ask the question: What is a system? Have them cite at least five examples of various systems.

2.2 Have the candidates identify the major components of the highway transportation system.

Candidate Resources

Suggested Reading:

Drive Right, pp. 2-15.
Let's Drive Right, pp. 5-15.
Sportsmanlike Driving (7th ed.), pp. 1-14.

Information Sheet:

HTS Definitions (p. 21)

Suggested Content Outline

2.3 Characteristics of each component:

A. Drivers

1. Age (15-19 age group—10 percent of the total of licensed drivers)
2. Temperament (Young people are inclined to be more erratic in temperament and more likely to let their emotions drive the car.)
3. Motivation (Motivation or reason for being on the highway influences a person's behavior as an operator.)

B. Vehicles

1. Number—millions
2. Kinds—cars, trucks, buses, motorcycles, mopeds, bikes
3. Size—mini, compacts, standard, large

Note: Emphasize that the capabilities of each type of vehicle have much to do with the safety and efficiency of the overall system.

Instructional Resources

Transparency:

Vehicle Component (T-7)

Learning Activities

2.3 Ask the question: How important are the character traits of temperament and motivation to successful operation of a motor vehicle?

Candidate Resources

Suggested Content Outline	Instructional Resources
C. Highways	Transparency:
1. Kinds—urban, rural highways, freeways	Highway Component (T-8)
2. Conditions—road surface, environment	
3. Motorist aids—signs, signals, and pavement markings	
Note: Stress that environmental differences create potential problems.	
2.4 HTS Failure: It Is Everyone's Problem:	Suggested Film:
A. Stress that highway traffic accidents are a serious social and economic problem in the United States.	*Boobytrap* (OTSEC)
1. Each year in the United States there have been over 14,000,000 traffic accidents: fatalities have averaged 53,000; permanently disabled 170,000; injuries 1.8 million.	Transparencies: Accident Types (T-9) Major Causes (T-10)
2. Highway crashes are the leading cause of death among Americans between 15 and 35 years of age. (Point out that the high accident rate of young drivers is an established fact.)	
3. The economic and social costs of the millions of highway accidents in the last decade have amounted to an estimated average of $20 billion dollars or approximately $99.00 for every man, woman, and child.	Suggested Films: *Crashes That Need Not Kill* *UFO* (Both ODHS)

Learning Activities	Candidate Resources
2.4 Ask the candidates to describe ten ways in which the highway can produce a system failure. Ask the candidates to describe at least six human errors that can lead to system failures. Also, have them identify five errors in human judgment that commonly cause accidents (collisions).	

Suggested Content Outline

B. Solution to problem: Use of safety belts. Point out that research conducted by universities, automotive companies, government agencies, and enforcement has shown that use of safety belts could eliminate each year:

   1. More than 8,000 deaths,
   2. More than one-third of the severe injuries, and
   3. Countless minor injuries.

C. Identify six ways in which safety belts protect against death and major injuries.

   1. Safety belts help to keep people or occupants inside the vehicle. (Point out that people are more likely to be hurt or killed if they are thrown out of the vehicle.)
   2. Safety belts protect people by reducing the force of impact against vehicle interiors. This impact is commonly referred to as the second collision.

Instructional Resources

Learning Activities

2.4 Using newspaper articles about accidents, ask the candidates to analyze each accident to identify the human, vehicle, and highway factors which may have contributed to the accident. Ask the question: Could the drivers involved have prevented the collision?

2.4 Ask the candidates to make a chart showing the most common injuries that are the result of the occupant's collision with some parts of the vehicles interior. Have the candidates explain how each one of the identified injuries could be avoided.

Using the accident reports in learning activity 2.4, try to determine if seat belts were or were not worn.

Identify and discuss some of the local intersections where most accidents occur. How could the accidents be reduced?

Candidate Resources

Pamphlets:

There Are Lots of Safety Belt Myths...Why Not Consider the Truths?

How Many of These Fairy Tales Have You Told?

Suggested Content Outline	Instructional Resources
3. Safety belts protect against bruises from sudden stops, swerves, and rear-end collisions. 4. Safety belts help the driver stay in his or her seat and keep control of the vehicle. Often the loss of control by a driver being thrown forward or sideways results in a much worse accident. 5. Safety belts keep the driver safer in case of fire or submersion. The driver has a better chance of remaining conscious and saving himself or herself. (Point out that fire and submersions happen in less than one percent of all injury-producing accidents.) 6. Safety belts can help people become safer drivers. They help drivers maintain full control in sharp turns or curves, if they swerve or meet the unexpected hazard. 7. Safety belts reduce fatigue because they help the driver maintain good posture.	Suggested Filmstrip: *Safety Belts—Fact or Fiction?*

Learning Activities	Candidate Resources
2.4 Ask the questions: • How do safety belts help to eliminate driver fatigue? • Why does a driver feel more confident when wearing seat belts? • What excuses are commonly given for not wearing or using seat belts? Refute these excuses.	

Suggested Content Outline

8. Safety belts hold people upright so they can see the road better.
9. Safety belts help to create a feeling of confidence.

2.5 Perception and Driving:

A. Point out that drivers decide and act, not according to what things are really like, but according to their perception of what they are like.

B. We see what our past experiences and associations have conditioned us to perceive.

2.6 Human Function and Driving:

A. Functions required to drive safely and efficiently

1. Stimuli—items to be observed
2. Sensing—physical process of gathering information
3. Perceiving—subjective mental process that determines what is seen
4. Judging and deciding—formulating actual responses
5. Vehicle responses—response of vehicle is mechanical but depends on driver actions.

Instructional Resources

Transparency:

Definition of Driving (T-11)

Transparency:

Driver Functions (T-12)

Transparency:

Skillful Operation of Controls and Devices (T-13)

Learning Activities

2.5 Ask the question: What are some of the major obstacles to driving?

2.6 Ask the question: What abilities other than motor skills are needed to drive safely? Which one is most important. Why?

Candidate Resources

Suggested Content Outline	Instructional Resources
Note: This discussion need only be illustrative of the functions since Unit 7 will cover this area in greater detail.	
B. Emphasize that kinesthetic (vehicle and roadway) responses provide feedback identifying changes in the vehicle's direction and speed that are necessary for safe and efficient driving.	
2.7 Factors Influencing Driver Abilities:	Transparency:
A. Point out that a number of factors influence how well a person performs. Beyond these factors, there are several temporary and permanent factors that influence the driver's general abilities.	Influencing Factors (T-14)
B. Point out, too, that the fact that one has been entrusted with an adult responsibility can be a strong incentive to drive safely and properly.	
2.8 System Influences:	
Various influences work to assist the driver or are designed to lessen the probability of incompetent drivers using the highways.	Transparency: System Influence (T-15)

Learning Activities	Candidate Resources
2.7 Ask the candidates to identify some of the temporary factors that can influence decision-making. (Ask before showing the transparency.)	
Organize a panel discussion on the capabilities and limitations of young drivers between the ages of 16 and 24 and older drivers between 25 and 54. Ask the panel to discuss the following topics: (1) psychological differences, (2) youth versus experience, (3) age, and (4) accident ratio between young and older drivers.	

LESSON 2: INFORMATION SHEET

Highway Transportation System Definitions

Highway transportation system—A complex system consisting of numerous driver-machine combinations with a variety of goals that operates in various regulated environments.

Highway transportation system element—A basic part or component of the system such as roadway, motor vehicle, traffic control device, or pedestrian.

Highway transportation system event—An occurrence or happening that takes place in the highway transportation system and has to do with the condition, status, or activity of one or more highway transportation system elements.

Highway transportation system hazard—Any element or event in the highway transportation system which presents a danger to the driver. It usually consists of conflicting traffic, obstruction in path, or something which would cause loss of control.

Highway transportation system setting—The actual location or physical surroundings of the street or highway such as urban, rural, freeway, business district, or residential area.

Margin of safety—The minimum stopping zone or area within which the driver-vehicle unit could come to a full stop if necessary.

Safe path of travel—The path or series of paths in which the traffic unit can move without colliding with obstacles or leaving the roadway.

System—An assembly of elements that carries out a desired function by the interdependent operation of the component parts.

Traffic conflict areas—Those areas where the available paths for two or more traffic units occupy the same place.

Traffic control—Any sign, signal, marking, or device placed on or adjacent to a street or highway by authorized public official.

Traffic interval (gap)—The distance between two moving traffic units.

Traffic path—That part or area of the highway on which a traffic unit can maneuver without interfering with other traffic.

Visual cues—Color, shape, motion, light, shade, positions, spacing such as smoke coming from tailpipe, direction of front wheels, back-up lights, to help a driver assess the driving environment or any potential change.

SYSTEM OBJECTIVE

THE SAFE, EFFICIENT, AND CONVENIENT

MOVEMENT OF PEOPLE AND GOODS

FROM PLACE TO PLACE

MAJOR SYSTEM COMPONENTS

DRIVER

PEOPLE WHO USE THE SYSTEM

MACHINE

MOTOR VEHICLES OPERATING ON THE ROADWAYS

HIGHWAY

ENVIRONMENT IN WHICH VEHICLES

ARE OPERATED BY THE DRIVER

VEHICLE COMPONENT

CAPABILITIES

CONTROLS . . .

MANEUVERABILITY . . .

RANGE OF PERFORMANCE . . .

HIGHWAY COMPONENT

ENVIRONMENTAL VARIETIES MAKE FOR:

COMPLEXITY

WEATHER

LIGHT

OTHER TRAFFIC

TRAFFIC CONTROLS

LANES OF TRAVEL

SURFACE CONDITIONS

ACCIDENT TYPES

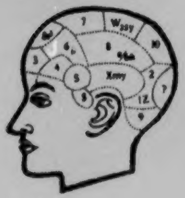
COLLISION IN TRAFFIC	63.1%
PARKED VEHICLE	12.7%
RAN OFF ROAD	11.2%
FIXED OBJECT	6.4%

MAJOR CAUSES

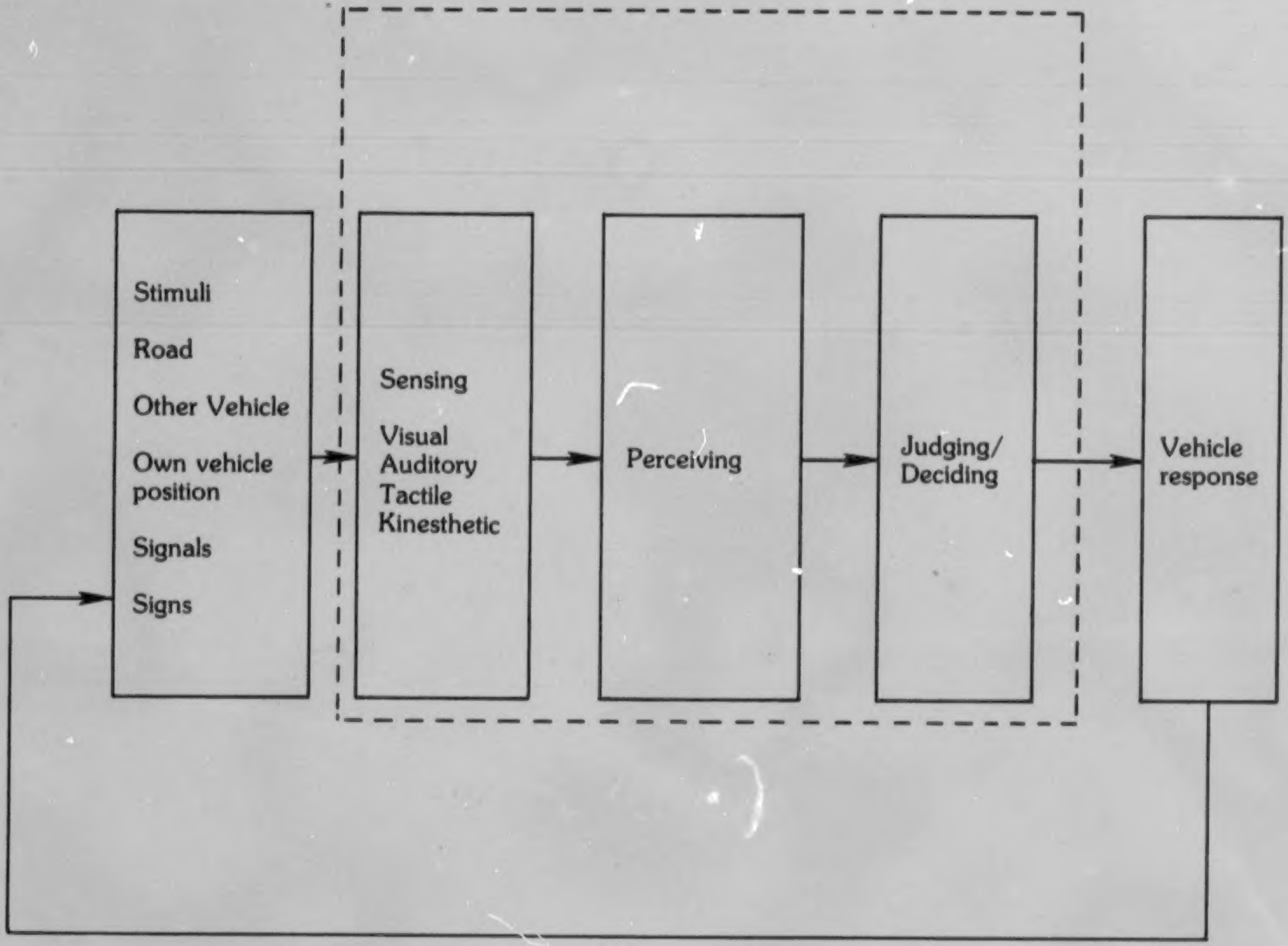
1. IMPROPER DRIVING	28.3%
2. FAILED TO YIELD	16.2%
3. FOLLOWING TOO CLOSE	11.3%
4. IMPROPER TURN	9.6%

DEFINITION OF DRIVING

DRIVING AN AUTOMOBILE CONSISTS OF
TAKING SKILLED AND PROPERLY
TIMED ACTIONS UNDER VARYING
ROAD AND TRAFFIC CONDITIONS
BASED ON DECISIONS
WHICH ARE DEPENDENT UPON
SOUND JUDGMENTS
REALISTIC PERCEPTIONS
LEARNED INFORMATION



DRIVER FUNCTIONS



Stimuli

Road

Other Vehicle

Own vehicle position

Signals

Signs

Sensing

Visual
Auditory
Tactile
Kinesthetic

Perceiving

Judging/
Deciding

Vehicle
response

SKILLFUL OPERATION OF CONTROLS AND DEVICES

STEERING CONTROLS

ACCELERATION CONTROLS

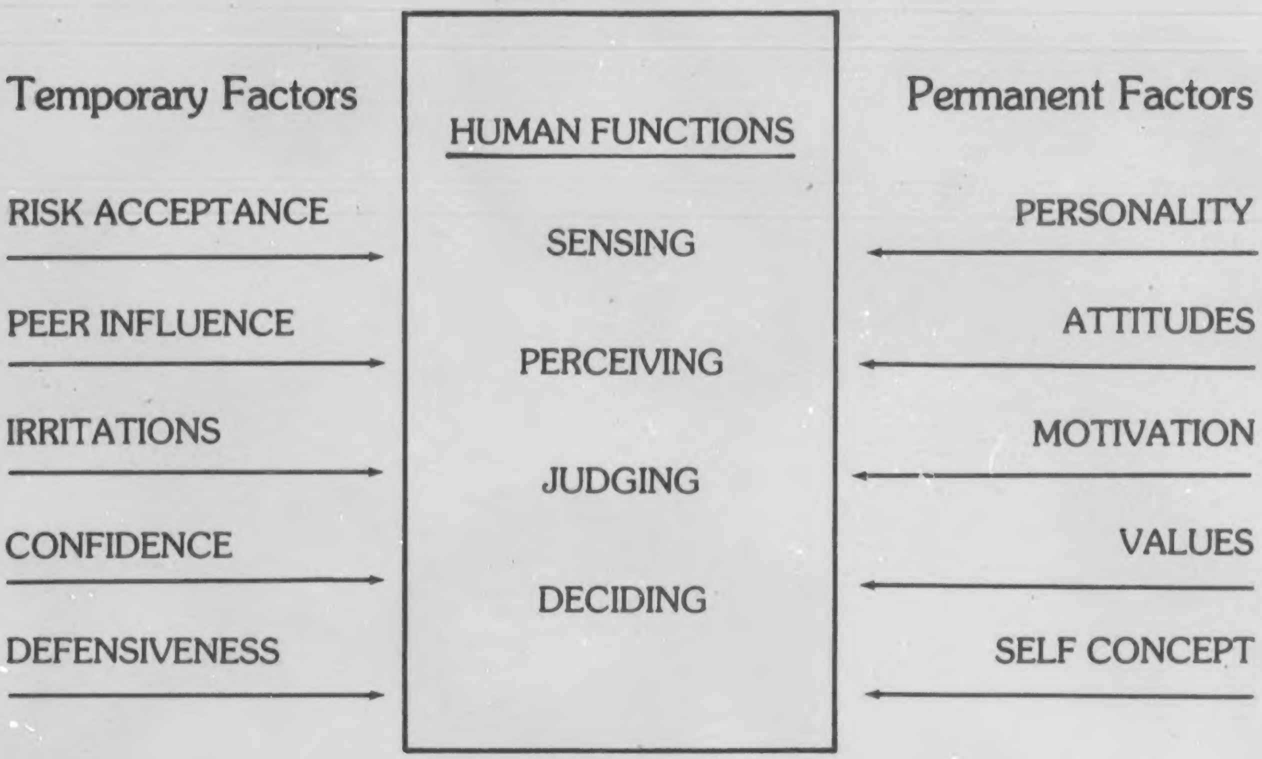
BRAKING CONTROLS

SIGNALING

SAFETY DEVICES OPERATION

39

INFLUENCING FACTORS



Temporary Factors

RISK ACCEPTANCE

PEER INFLUENCE

IRRITATIONS

CONFIDENCE

DEFENSIVENESS

HUMAN FUNCTIONS

SENSING

PERCEIVING

JUDGING

DECIDING

Permanent Factors

PERSONALITY

ATTITUDES

MOTIVATION

VALUES

SELF CONCEPT

SYSTEM INFLUENCE

Component	Approach
POLICE	ENFORCEMENT
COURT	CORRECTIVE AND ADJUDICATIVE
ENGINEER	DESIGN—CONSTRUCTION, MAINTENANCE
DEPT. OF MOTOR VEHICLES	DRIVER LICENSING
LOCAL GOVERNMENT	LAWS AND ORDINANCES
STATE GOVERNMENT	LEGISLATION
FEDERAL GOVERNMENT	GUIDELINES—LAWS, REGULATIONS
PRIVATE—PUBLIC AGENCIES	INFORMATION AND EDUCATION
EDUCATION	DRIVER EDUCATION AND IMPROVEMENT

LESSON 3: Basic Traffic Laws and Rules for Safe Driving Performance

Time: 2 1/2 hours

Overview: Traffic laws and regulations establish the specifications for behavior so that all drivers have an equal chance to reach their destinations with a minimum of frustration and inconvenience. To help control the great amount of traffic, a system of traffic control devices is used. These devices help provide drivers with sufficient information to permit quick decisions and to move from one place to another safely.

LESSON OBJECTIVE: The candidates will identify, classify, and state the meaning of various signs, signals and pavement markings. In addition, the candidates will identify and apply the appropriate right-of-way and speed regulations to given situations and conditions.

Instructional Concepts

1. Signs, signals, and pavement markings furnish highway users with valuable information.
2. Information provided by these signs and signals helps drivers maneuver their vehicles in safe driving paths and at safe speeds.
3. Traffic control devices are a mixture of shapes, figures, symbols, lights and lines designed to present short, clear messages.
4. Signs, signals, and pavement markings help drivers avoid errors by warning them about hazards.
5. Disobeying right-of-way laws can confuse other roadway users and cause serious traffic accidents.
6. Regardless of posted speed limits, drivers should select a speed that will minimize the risk of an accident while providing efficient traffic movement.

Suggested Content Outline

3.1 Traffic Signing:

Classification of traffic signs for identification and discrimination

1. Signs can be classified into three groups
   - regulatory
   - warning
   - guide
2. Each sign has special meanings that each driver should know:
   - Regulatory signs tell drivers what they can and cannot do. Drivers who violate regulatory signs are subject to arrest and punishment.
   - Warning signs do not have the force of law. They warn drivers about possible hazards ahead. Drivers who ignore warning signs do so at their own risks.
   - Guide signs provide information. They help drivers stay on the right road. They also tell drivers where to find services.

Instructional Resources

Ohio Driver's Handbook, pp. 45-52.

Signs for Safety (ODHS)

Uniform Traffic Control Signs (ODOT)

Pre-Test: Identify Shape and Meaning (pp. 46-47)

Information Sheet:

Traffic Controls (pp. 48-54)

Film:

Signs and Lines (ODHS)

Filmstrip:

Signs and Signals Part One (Safety Centers, Inc.)

Learning Activities

3.1 Give the candidates the pre-test on traffic signs. Grade the test before starting discussion.

Ask the candidates to list at least five reasons for the use of traffic control devices. In addition, have them discuss several reasons for nationalized standards for signs, signals, and pavement markings.

Candidate Resources

Pre-Test: Identify Shape and Meaning

Ohio Driver's Handbook, pp. 45-52.

Signs for Safety (ODHS)

Suggested Reading:

Sportsmanlike Driving, pp. 121-150.

Let's Drive Right, pp. 60-77.

Suggested Content Outline

3.2 Meaning and Function of Various Signs:

A. Signs can be identified both by color and shape.

1. Each kind of sign has a specific color

background	message symbol	classification
red	white	regulatory
white	red	regulatory
white	black	regulatory
white	green	regulatory
yellow	black	warning
orange	black	warning construction
green	white	guide
blue	white	guide service
brown	white	guide recreation

2. To help identify signs, shape is used in addition to color
   - Octagon—Stop
   - Triangle—Yield
   - Diamond—Warning
   - Round—Warning (railroad)
   - Pentagon—Warning (school)
   - Pennant—Warning (no passing)
   - Horizontal Rectangle—Guide, Motorist Services, Recreation
   - Vertical Rectangle—Regulatory

Instructional Resources

Films:

Traffic Control Devices:

Signs, Signals, and Pavement Markings

Driving in City and Suburban Traffic

Driving on Rural Highway

Driving Through Construction Work Areas

Driving on Freeways

Worksheet:

Can You Tell the Meanings? (pp. 55-57)

Learning Activities

3.2 Use the film series on *Traffic Control Devices* to test the candidates on various traffic signs, signals, and pavement markings utilized in different driving environments.

Have the candidates complete the worksheet "Can You Tell the Meanings?"

Candidate Resources

Worksheet:

Can You Tell the Meanings? (pp. 55-57)

Suggested Content Outline

B. Symbols on signs provide the driver with easy to read messages.

3.3 Traffic Control Signals:

A. Three kinds of signals control the flow of traffic. These include traffic control, pedestrian, and lane-use signals.

1. The traffic control signal that drivers and pedestrians are most familiar with is the red, yellow, and green set of lights found at intersections. These signal lights mean:
    - Steady red—drivers must stop and not enter the intersection,
    - Steady yellow—warns the driver to approach with caution and be prepared to stop when the red light appears, and
    - Steady green—drivers may enter the intersection when it is safe to do so.
2. In addition, a traffic control signal may have red, yellow, green arrows. These arrows mean:
    - Green arrow—permits movement only in the direction indicated,
    - Yellow arrow—movement in that direction is about to stop, and
    - Red arrow—do not move.

Instructional Resources

Worksheet:

Can You Tell the Meanings? (pp. 55-57)

Filmstrip:

Markings and Signals
Part Two

Information Sheet:

Traffic Controls (p. 53)

Learning Activities

3.3 Ask the candidates to identify the laws a driver must observe when approaching a red flashing light, a yield sign, when making a right turn on red, and when approaching a flashing railroad crossing gate.

Ask the question: What are the advantages of allowing drivers to turn right on red? The disadvantages?

Ask the question: Why is it safe to continue through an intersection when a yellow light suddenly appears just after you enter the intersection?

Candidate Resources

Information Sheet:

Traffic Controls (p. 53)

Suggested Content Outline

3. At many intersections, right turns are permitted on the red light after coming to a full stop. Emphasize that the driver must yield the right-of-way to cross traffic and to pedestrians.
4. Flashing lights are used at some intersections and at hazardous locations. These signals mean:
    - Flashing red—drivers must come to a complete stop, and
    - Flashing yellow—drivers must slow down and proceed with caution.

B. Pedestrian signals are found at some intersections for the sole purpose of controlling and protecting pedestrian traffic. These signals show the illuminated words WALK and a flashing WALK in white, and orange DONT WALK.

C. Lane-use signals are designed to help move more traffic over a section of highway by reversing the flow of traffic (especially helpful during rush hour traffic). Commonly used lane-use signals include:

1. Steady downward green arrow. The driver may drive in the lane over which such a signal is found.
2. Steady yellow X. The driver should prepare to leave the lane.
3. Steady red X. The driver should never drive in this lane.

Instructional Resources

Filmstrip:

Markings and Signals
Part Two

Learning Activities

3.3 Ask the questions:

- What is a stale green light?
- Why do you think it is a useful visual-search technique for new drivers to check how long a green light has been on?

Ask the candidates to explain how a progressive-signal system and a traffic-actuated signal system help to move more traffic safely and efficiently.

Candidate Resources

Suggested Content Outline

3.4 Pavement Markings:

A. Pavement markings are used to regulate, warn, and guide drivers. Their most important use is to separate traffic moving in the same and opposite directions in the form of lines that are either solid or broken.

B. The markings can either be yellow or white. Yellow is used for center lines that separate two-way traffic; white lines are used to separate traffic moving in the same direction and are called lane lines.

1. Center lines
   - A broken yellow line on a two-lane highway means that passing is permitted in either direction.
   - Two yellow lines—one solid and one broken—mean that passing is permitted in one direction only. Passing is permitted only for those with the broken yellow line in their lane.
   - Two solid yellow lines mean that passing is not permitted in either direction. Drivers may cross these lines when they are making a legal left turn.
   - Two solid yellow lines and two broken yellow lines mean that left turns are permitted in this area from either direction.

Instructional Resources

Filmstrip:

Markings and Signals
Part Two

Information Sheet:

Traffic Controls (p. 54)

Learning Activities

3.4 Ask the candidates to explain the functions of various center lines as they are used in their community. (Use the transparency on pavement markings for discussion of each type of center line.)

Candidate Resources

Information Sheet:

Traffic Controls (p. 54)

Suggested Content Outline

2. Lane lines
   - Broken white lines separate traffic moving in the same direction. Crossing over the line is permitted.
   - Solid white lines mark special lanes set aside for buses or for left or right turn lanes, exit ramp lanes on freeways, and the separation between two major freeways. Crossing these lines is not illegal but is discouraged to decrease the chances of sudden lane changes and collisions.
   - Solid white lines also mark the outside edge of the outermost lane on a freeway or expressway. These are known as edge lines.
3. Other pavement markings
   - Left- and right-turn lanes are often indicated by pavement markings as well as symbols. When an arrow is supplemented with the word ONLY, cars in that lane must move in the direction indicated by the arrow.
   - Pedestrian, school, or railroad crossings take the form of words and symbols.
   - Pedestrian crosswalks are marked with white lines painted across the roadway at intersections and mid-block points.

Instructional Resources

Information Sheet:

Traffic Controls (p. 54)

Learning Activities

3.4 Ask the candidates to describe the various pavement lane lines that are common to their locality.

Ask the candidates why a driver must obey the directions of a traffic officer even though they might be contrary to those messages shown by signs, signals, or pavement markings.

Candidate Resources

Information Sheet:

Traffic Controls (p. 54)

Suggested Content Outline

3.5 Rules That Regulate Right-Of-Way:

A. Right-of-way means the immediate privilege of using the roadway. The driver who has the right-of-way is the favored driver. Right-of-way should be considered as given by one person to another.

1. If one driver does not give another driver a legally deserved right-of-way, the other driver should not take it.
2. Drivers and pedestrians should not take the right-of-way unless they are sure that others are yielding.

B. Right-of-way rules are based on three factors:

1. The space needed to drive safely which is made possible by:
   - Stop and yield signs
   - Traffic control signals

Instructional Resources

A Resource Curriculum in Driver and Traffic Safety Education, pp. 55-57.

Ohio Driver's Handbook, pp. 25-37.

Sportsmanlike Driving, pp. 129-136.

Learning Activities

3.5 Have the candidates define the following terms: yield, right-of-way, and merging.

Ask the question: Is right-of-way a privilege or a right? Why?

Have the candidates identify ten different HTS situations for which the right-of-way laws apply.

Candidate Resources

Suggested Reading:

Ohio Driver's Handbook, pp. 25-37.

Information Sheet:

Yield—When? (pp. 58-59)

Suggested Content Outline

- Decisions a driver makes at intersections (uncontrolled). Where there are no controls, the drivers themselves must provide space between vehicles.
- In general, drivers who face a yield sign, a stop sign, or a red light, must yield the right-of-way to other traffic and pedestrians already at or in the intersection.

2. The position of each vehicle on the roadway, and
3. The maneuvers the drivers are performing.
    - Vehicle position and maneuvers help drivers know who should have the right-of-way.
    - Drivers turning left or right, always must yield to other vehicles or pedestrians in their turning path.
    - Drivers must yield the right-of-way if they are: (a) leaving or entering a parking space, (b) changing lanes, (c) entering a major highway, and (d) near an approaching emergency vehicle.

C. Last clear chance law

1. A driver can be judged partially responsible for a collision if he or she had the "last clear chance" to avoid the collision.

Instructional Resources

Suggested Films:

Case of Officer Hallibrand

Uniform Traffic Laws

The Unteachables (ODHS)

Learning Activities

3.5 Ask the candidates to define what is meant by the last clear chance law.

Candidate Resources

Suggested Content Outline

2. Last clear chance is known as contributory negligence in legal terms.

3.6 Speed Laws:

A. Reemphasize that the purpose of the HTS is to move people and goods safely and efficiently. The more safely vehicles can travel, the more efficient the HTS.
   1. Proper speed and control is every driver's responsibility.
   2. The speed at which a person chooses to drive affects his or her ability to cope with hazards and threatening situations successfully.
   3. Traffic records identify excessive speed as a major cause of collisions.

Instructional Resources

Suggested Film:

Last Clear Chance (ODHS)

A Resource Curriculum in Driver and Traffic Safety Education, pp. 32-33.

Ohio Driver's Handbook, pp. 25-37.

Pamphlet:

Highway Speeds—How Fast Is Too Fast? (American Family Insurance)

Learning Activities

3.6 Ask the questions: Why is the proper speed selection important? How can speed affect a driver's control of a vehicle?

Candidate Resources

Suggested Reading:

Ohio Driver's Handbook, pp. 25-37.

Pamphlet:

Highway Speeds—How Fast Is Too Fast?

Additional Reading:

Safe Performance Driving pp. 97-112.

Suggested Content Outline

4. With increased speed, a driver has less time to identify traffic events and hazardous situations and to make correct decisions.

B. Factors influencing speed selection
   1. A person's driving experience.
   2. The kind of vehicle being driven.
   3. Present driving or legal conditions.
   4. Awareness of driving clues in various traffic situations.

C. Clues for speed selection
   1. The type of roadway.
   2. The number of lanes.
   3. The type of surface.
   4. Weather conditions.
   5. Highway traffic control devices—especially regulatory and warning signs.

D. The speed posted on a regulatory sign tells drivers the maximum speed that they can travel under ideal road and weather conditions. (When road and weather conditions are less than ideal, drivers should adjust their speed to the existing conditions.)

E. The type and condition of the vehicle driven influences the selection of how fast one travels.

Instructional Resources

Suggested Films:

Rural Driving—Driver Education Series

In Control (ODHS)

Learning Activities

3.6 Ask the questions:

- What factors influence most a driver's selection of a safe speed?
- How does the type of vehicle influence the driver's selection of speed?

Candidate Resources

Suggested Content Outline

F. The flow of traffic provides another clue to speed selection. Driving at a common speed helps traffic flow smoothly. Point out:

   1. A person driving too slow can force drivers behind to decrease speed, causing others to pass when it is not safe to pass.
   2. A person driving too fast can upset the steady flow of traffic by changing lanes constantly to pass other vehicles.
   3. If the driver drives at a common speed, he or she will not pass or be passed by other vehicles.

G. There are two speed regulations that all drivers must observe:

   1. The posted speed limit, which states the maximum or absolute legal speed for any condition, and
   2. The basic speed limit, which means driving at a speed that is safe under existing vehicle, road, and weather conditions.

Instructional Resources

Slides:

Local Traffic Situations

Learning Activities

3.6 Ask the questions:

- Should you always drive at the speed shown on a speed limit sign?
- What is the difference between absolute and the basic speed law?
- What three factors determine the basic speed law?
- Which one is the more important to the driver and other drivers?

In a series of slides depicting various highway and traffic conditions, ask the candidates to select the correct speed.

Candidate Resources

Suggested Content Outline

Instructional Resources

H. Speed citations are given to drivers who disobey speed regulations. Citations can be given for three speed violations:

1. Speeding—driving faster than the posted speed limit.
2. Speed too fast for existing conditions.
3. Excessive speed—driving faster than the posted limit and existing conditions.

Learning Activities

Candidate Resources

3.6 Ask the question: What is meant by the phrase driving too fast for conditions?

Should drivers be allowed some tolerance, say 10-15 mph, before they are cited for a speeding or speed-too-fast for conditions violation?

Invite local resource persons, such as traffic officers, court or safety personnel to discuss problems and needs for your area.

PRE-TEST

LESSON 3: BASIC TRAFFIC LAWS AND RULES FOR SAFE DRIVING PERFORMANCE

Identify Shape and Meaning

Directions: Draw the correct shape for:

1. stop signs
2. guide signs
4. advance warning of no passing zones
5. regulatory signs
6. school advance and school crossing signs
7. warning or hazards
8. railroad crossing signs

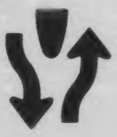
Directions: What are the colors of the above signs?

1.
2.
3.
4.
5.
6.
7.
8.

Pre-Test

Directions: Next to each message or symbol below, write the correct **color.** Draw the correct **shape** around each message or symbol. Write below each shape the correct **classification** for each sign message or symbol.

1



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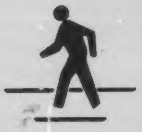

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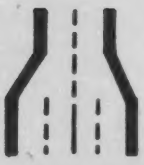

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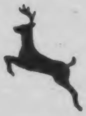

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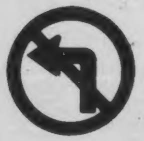

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8 YIELD

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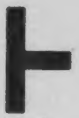

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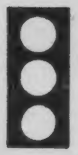

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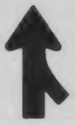

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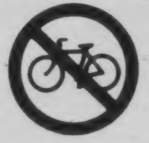

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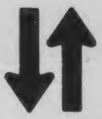

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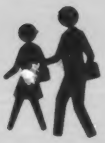

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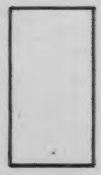
LESSON 3: INFORMATION SHEET

Traffic Controls: Regulatory Signs

What a driver must do

What a driver cannot do



White

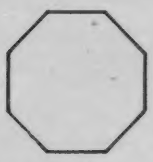
Black

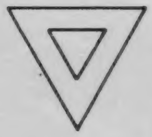
Red

Right-of-Way

Stop

Yield





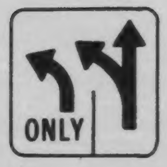
Movement

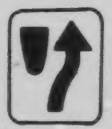
Turning

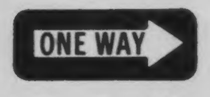
Lane Use

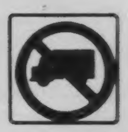
One-Way

Exclusion









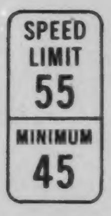
Speed

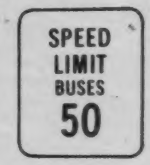
Upper Limit

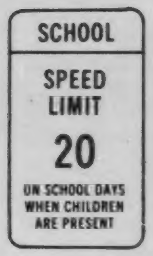
Minimum

Vehicle Type

Night



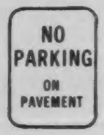


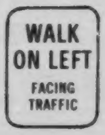


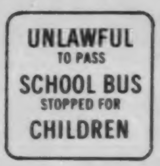
Others

Parking

Pedestrian

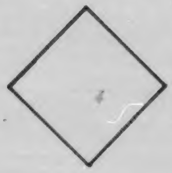






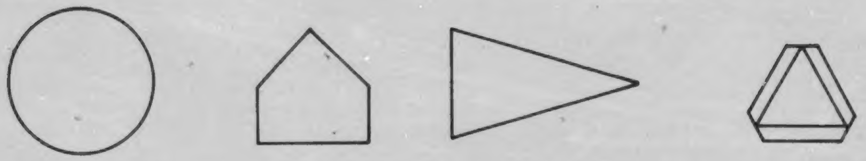
Traffic Controls: Warning Signs

Basic Shape and Color

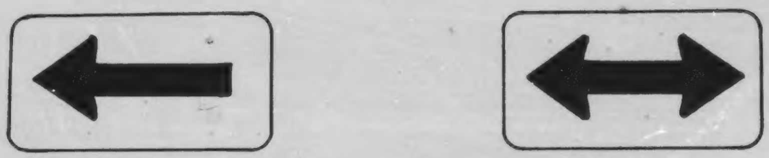


- Roadway Conditions
- Roadway Changes
- Traffic Conditions

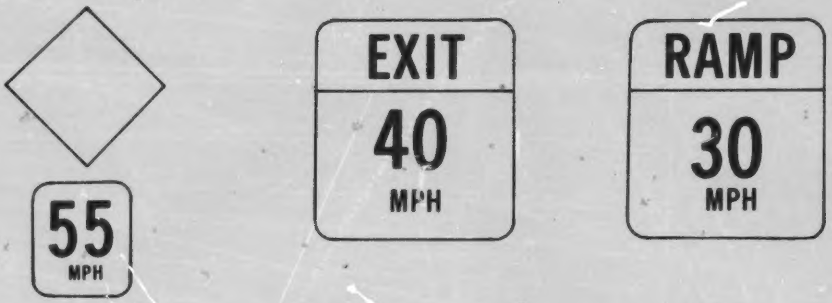
Other Shapes



Large Arrows

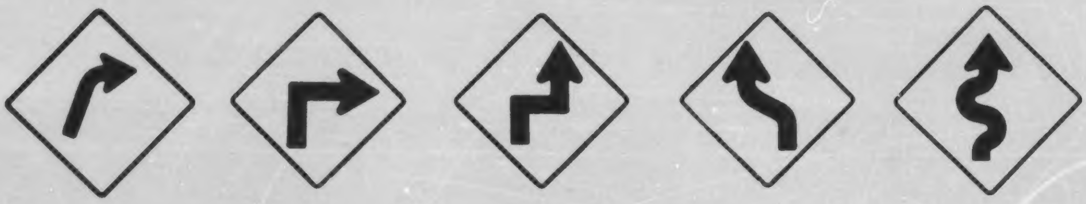


Suggested Speed



Meaning of Symbols

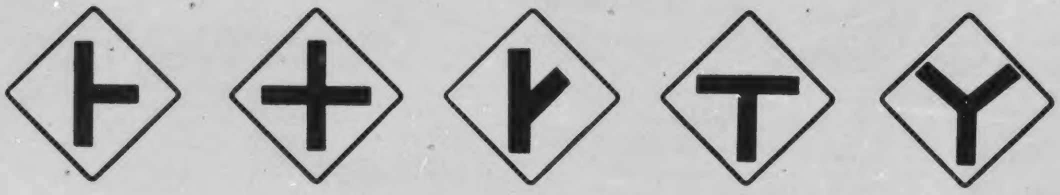
CURVES



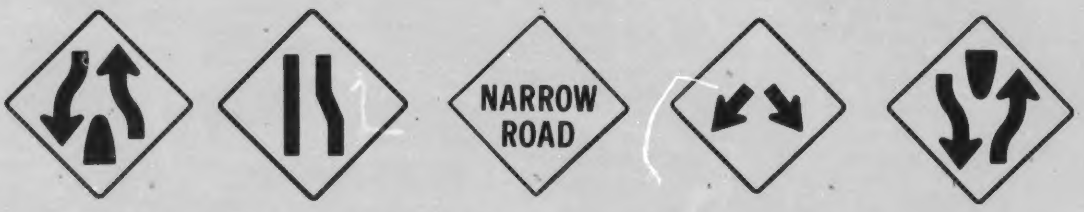
Traffic Controls: Warning Signs

Meaning of Symbols

INTERSECTIONS

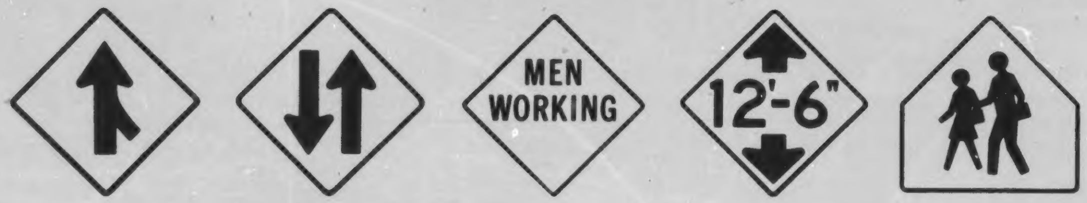


CHANGES IN WIDTH



READ FROM THE BOTTOM UP

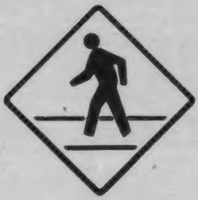
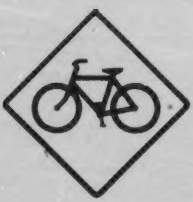
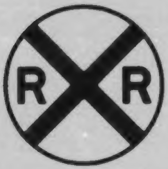
TRAFFIC

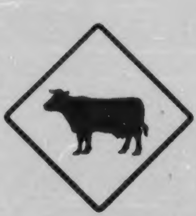
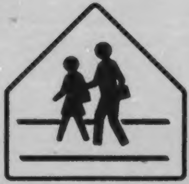


Traffic Controls: Warning Signs

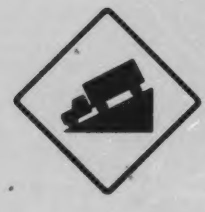
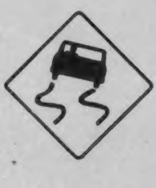
Meaning of Symbols

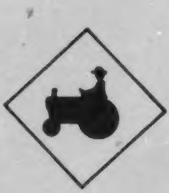
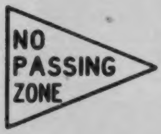
CROSSINGS

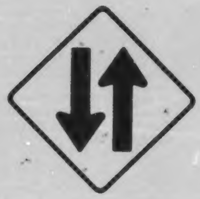
CONDITIONS

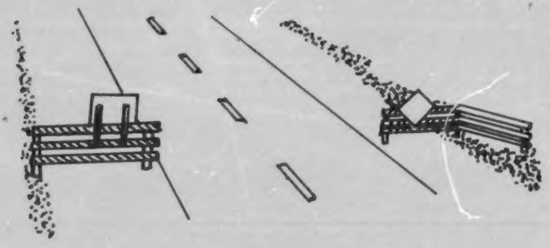
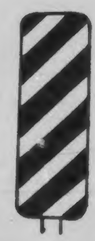



Traffic Controls: Construction Signs

Basic Shape and Color



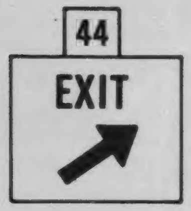
Barricades—Stripes should point in direction of travel

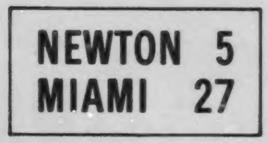



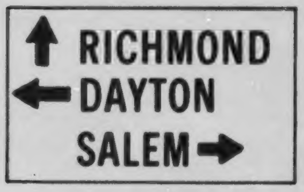
60

Traffic Controls: Guide Signs

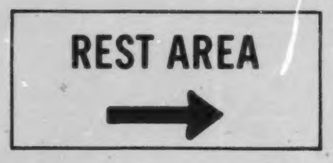
Destination and Distance—White or Green

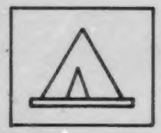


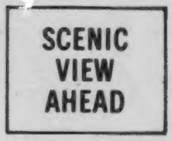


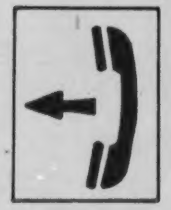


Roadside Service—Blue

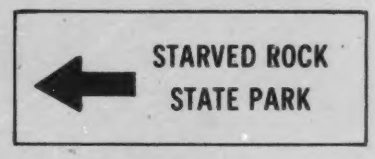


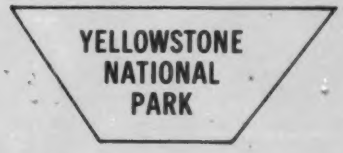




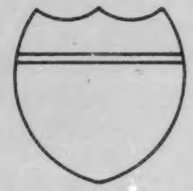


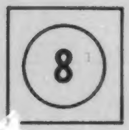
Recreation Areas—Brown

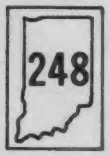


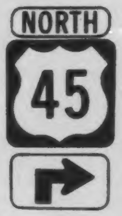


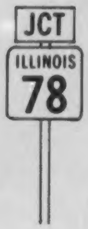
Route Markers

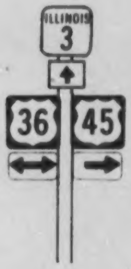








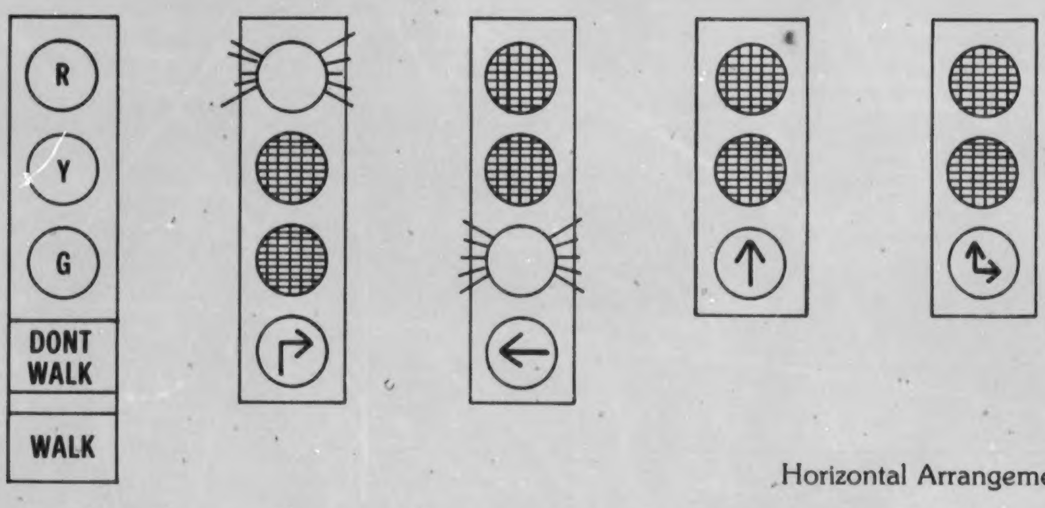




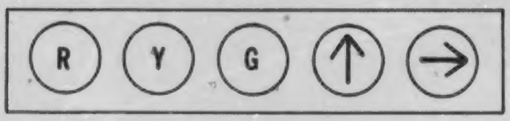
LESSON 3: INFORMATION SHEET

Traffic Controls: Signal Lights

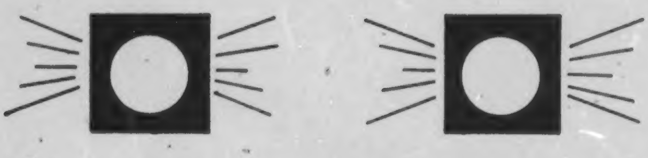
Standard Signal Light Controls



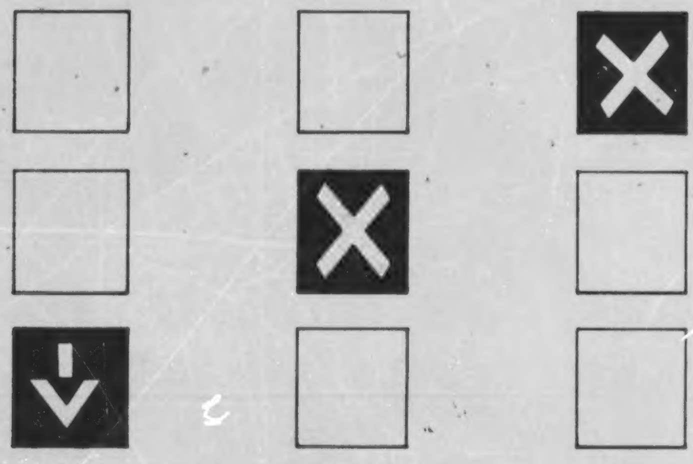
Horizontal Arrangement



Flashing Signal Lights

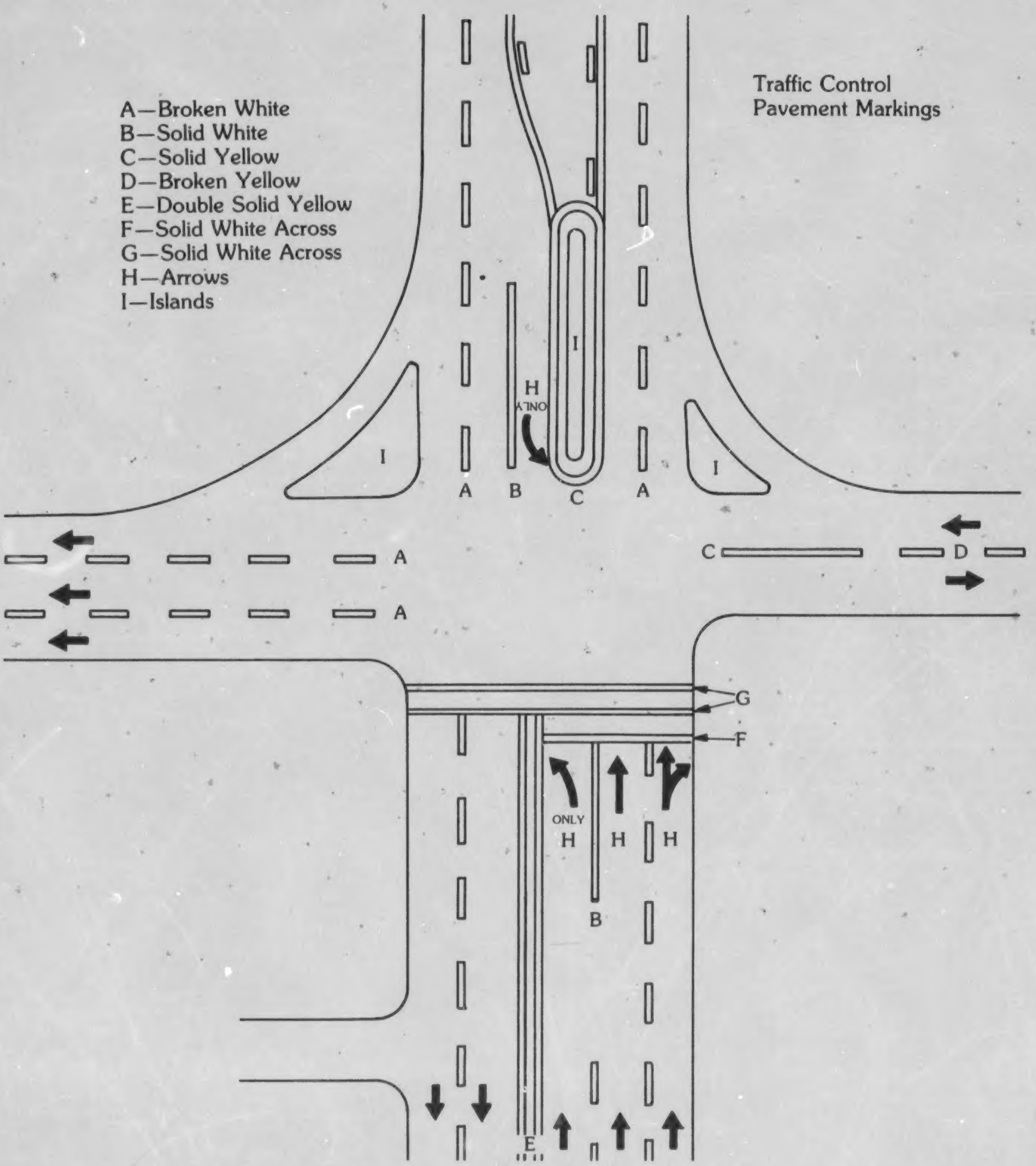


Lane Signal Lights



LESSON 3: INFORMATION SHEET

Traffic Controls



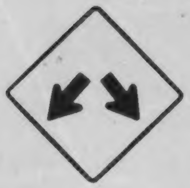
Traffic Control Pavement Markings

A—Broken White
B—Solid White
C—Solid Yellow
D—Broken Yellow
E—Double Solid Yellow
F—Solid White Across
G—Solid White Across
H—Arrows
I—Islands

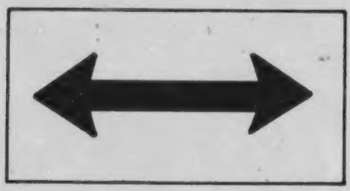
LESSON 3: WORKSHEET

Can You Tell the Meanings?

Directions: Although the pictured symbol of each of the signs looks similar, each has a separate meaning. What is the meaning of each sign?



A



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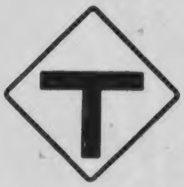

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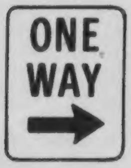

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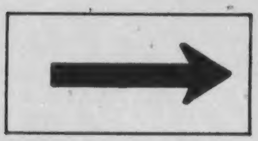

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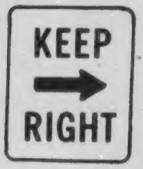

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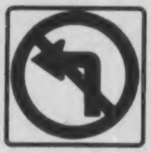

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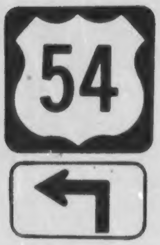

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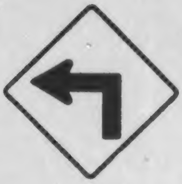
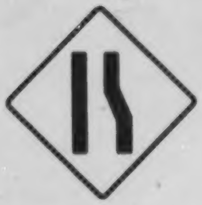


I

Worksheet

Write the meaning or message of each sign.



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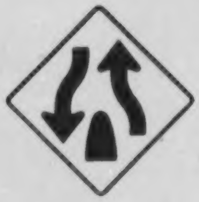
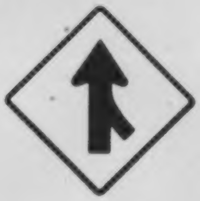
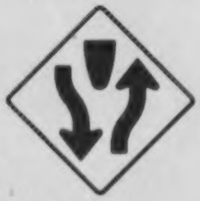


K



L



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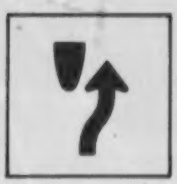

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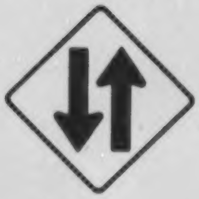

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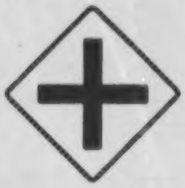

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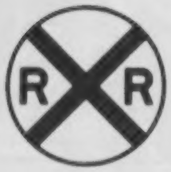
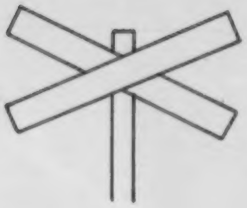


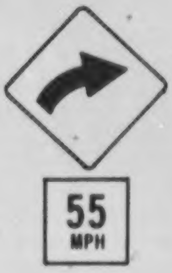
Q



R

Worksheet

Write the meaning or message of each sign.



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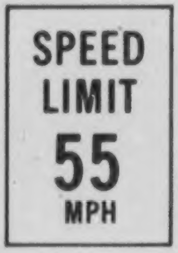

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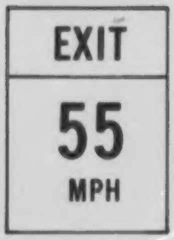

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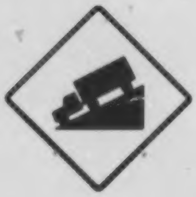

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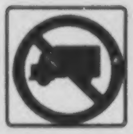

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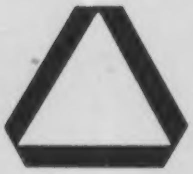

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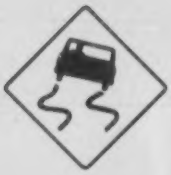

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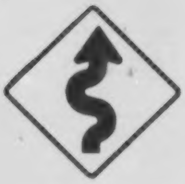

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LESSON 3: INFORMATION SHEET

Yield—When?

As you drive you will encounter a sign with the legend YIELD. What does this mean to you as a driver or as a pedestrian? How should you interpret this term?

YIELD is a vague term and it conveys different meanings to different drivers. As a new driver or experienced driver you must understand the meaning of YIELD in order to protect yourself and follow legal requirements. The legal procedure to follow when yielding is usually written in terms of which driver shall yield, and not in terms of who has the right-of-way. The right-of-way is something which is to be given, not taken.

Since you cannot depend on the other driver granting you the right-of-way, you must always be prepared to give way to the other driver. Even at intersections controlled by signs or signals which clearly indicate the right-of-way for you, always be prepared to yield the right-of-way.

Now, apply this law to various situations. As you approach an intersection you observe an inverted triangular sign which reads YIELD. Intersecting traffic has been given the right-of-way, and you must be prepared to yield. Strictly speaking, this means, slow to 20 mph and be prepared to stop for approaching cross traffic. If you are on the roadway that is granted the right-of-way, prepare yourself for the actions of other drivers in case they fail to heed the signs or misjudge your speed or your intentions.

As you approach the STOP sign you know that cross traffic has been granted the right-of-way, and you must come to a complete stop. You may proceed when you can do so without interfering with cross traffic. Occasionally intersections are controlled by four-way stop signs. In this case, traffic from all directions must come to a complete stop. If your car was the first vehicle stopped there, all other traffic should yield and allow you to go first. However, be alert for the driver who may take the right-of-way. If two cars approach an intersection at the same time, the car on the right is to be granted the right-of-way.

Even where traffic signals control an intersection, you must be prepared to give the right-of-way. If you are facing a red light, you know that you must yield. However, many drivers take for granted, when they approach a green light, that they have the right-of-way. The green light signifies that you have been granted the right-of-way, but the other driver may not see, or may ignore the red light facing him or her. As a result, you must be prepared to yield.

Other situations where you should be prepared to yield the right-of-way are those involving pedestrians, bicyclists and motorcyclists. They may not have the right-of-way, but a collision with a pedestrian or a cyclists too frequently results in serious injury or damage to property, even death. Since they have no protection against an automobile in a collision, be prepared to yield.

Be especially alert when making turns. If you are making a left turn, be aware of oncoming traffic and pedestrians crossing your lanes of travel. Once oncoming traffic has cleared, do not start moving until you can see that there are no pedestrians in your turning path. Pedestrians should abide by the same right-of-way laws as cars, but they may be unaware of your car, or may disregard traffic control devices.

When driving, you will often encounter uncontrolled intersections. There are no signs or signals to tell you who should yield. You must always be prepared to stop. Expect cross traffic and be prepared to give the other driver the right-of-way.

Yielding the right-of-way involves judgment. You must first know how the laws concerning right-of-way are worded; then you must know how to apply the law to various situations. You have to be alert to situations where you are legally given the right-of-way, and to situations where you must yield or give the right-of-way to others.

You must also be prepared to give the right-of-way in situations where the other drivers may not yield. It is always better to be ready to compensate for errors of others, drivers and pedestrians alike, than to require them to compensate for your errors.

LESSON 4: Environmental Factors

Time: 2 1/4 Hours

Overview: This unit presents various factors in the environment which affect the driver, the vehicle, and the highway. The major focus is on visual limitations caused by the atmosphere, visual limitations inside the vehicle, and limited traction. Do not teach this unit in isolation or as the driver encountering "special conditions." The driver always faces some reduction in visibility and degree of traction limitation.

LESSON OBJECTIVE: The candidate will identify and discuss the capabilities and limitations of drivers under various conditions of reduction in visibility and traction.

Instructional Concepts

1. View obstructions are always present in driving. However, the unnecessary ones should be eliminated and the others adjusted for by the operator.
2. Weather conditions may reduce visibility thereby adding the limitations of nighttime driving to a daytime situation.
3. Due primarily to reduced visibility, driving is more difficult under nighttime driving conditions. The competent operator adjusts for these differences.
4. Vehicle control depends on the friction between the tires and the road surface.
5. The greater the friction, the less the possibility the tires will skid.
6. Traction varies, depending on tire construction, tread depth, tire inflation, and the type of roadway surface (dry or wet).
7. Large amounts of water combined with worn or underinflated tires can cause a vehicle to hydroplane, even at moderate speeds.
8. Skidding or sliding on turns or curves occurs when the inertia force is greater than the side thrust frictional force of the vehicle. The cause is an improper combination of speed and directional change.

Suggested Content Outline

4.1 Visual limitations of the atmosphere:

A. Nighttime or Darkness—The information needed in decision-making is appreciably reduced at night. The following factors must be emphasized:

1. Aside from reducing detail, darkness conceals hazards; hence, the operator makes decisions based on sketchy and incomplete information.
2. Judging the speed and position of another vehicle is more difficult at night.
3. Operators must depend on headlights that illuminate only a relatively short and narrow path ahead. (Light does not bend.)
4. The amount of adequate highway lighting is limited.
5. Glare from roadside lighting and from headlights of oncoming vehicles impairs visibility.

Instructional Resources

A Resource Curriculum in Driver and Traffic Safety Education, pp. 46-49.

In-Car Instruction: Methods and Content, pp. 286-292.

Film:

Driving At Night (ODHS)

Learning Activities

4.1 Ask the candidates to identify various visual handicaps imposed by darkness and describe compensatory measures for each.

Mount a bright spotlight or flashlight in the center of the chalkboard. With the room darkened, write something on the chalkboard directly under the spotlight. On the count of "three" turn on the spotlight for one second. Then check to see how many candidates were able to read what was written on the chalkboard.

Candidate Resources

Suggested Reading:

Drive Right, pp. 218-232.

Sportsmanlike Driving, pp. 151-172.

Information Sheets:

Nighttime Driving Techniques (pp. 67-68)

Suggested Content Outline

Instructional Resources

B. To compensate for the limitations imposed by darkness, the driver can:

1. Keep panel lights dim to help force vision to road ahead. (Keep bright enough to read speedometer and gauges.)
2. Maintain a stopping distance well within your headlight range. At 55 mph, even bright lights are just about reaching the end of the stopping distance.
3. Keep headlight lenses clean as well as properly aimed. Keep windshield clean on the inside as well as the outside.
4. Watch beyond the headlights for slow moving or unlighted vehicles, curves and intersections, road obstructions, pedestrians and animals.
5. Avoid looking directly into glaring headlights of oncoming vehicles.
6. Allow a greater margin of safety when overtaking and passing.
7. Avoid wearing sunglasses or tinted face shields (motorcycle operator).
8. Be sure taillights, back up lights, turn signals, and license plate lights are functioning and lenses are clean.
9. Use low beam headlights (never parking lights since they make a car appear farther away than it really is) at dawn or dusk.

Learning Activities

Candidate Resources

4.1 Ask the candidates to explain what it means to overdrive your headlights or the range of your headlights at night.

In a class discussion, have the candidates list impairments of vision caused by dirty or foggy windows caused by smoke film or air conditioner film. Have the candidates state preventive or compensatory ways to correct these impairments, especially at night.

Suggested Content Outline

Instructional Resources

C. Sun glare—The sun can be particularly hazardous because the eye adapts slowly to change in light intensity. When facing glaring sun, the driver can improve visibility by:

1. Keeping the windshield clean inside and outside.
2. Properly positioning the sun visor.
3. Wearing good sunglasses.

Note: When driving away from the sun, do not assume the oncoming drivers can see you as well as you see them. In extreme cases, turn on your headlights. After hours of driving in the bright sun, your visual efficiency will be reduced at dusk and at night.

D. Rain—Vision distortion, especially at night, can occur as the wet surfaces reflect all light. The driver should:

1. Turn on the headlights in medium to heavy daytime rain. It helps other drivers to see you (those meeting and crossing your path as well as the drivers you are following because their rain splattered back windows may not allow them to see you as readily). An unlighted vehicle is difficult to detect in a mirror during a heavy daytime rain.

Film:

Driving in Bad Weather
(ODHS)

Learning Activities

Candidate Resources

4.1 Ask the questions:

- Besides water, what else should be put in the windshield washer container and for what purpose?
- When you are driving directly away from the sun, oncoming drivers are facing the sun. What can you do to help them see your vehicle?
- Who will benefit more when you switch on your headlights during a heavy day time rain, you or other vehicle operators? Why?

Suggested Content Outline

2. Keep windshield wipers and washers in good working condition. If windshield wipers begin to streak, they may be covered with road film. If they continue to streak, replacement is necessary.

E. Fog—This is the most dangerous visibility limiter. Since drivers have a false sense of security in many fog situations, the driver should:

1. Turn low beam headlights on to improve visibility.
2. Do not use high beams in fog. The fog reflects the light back to the driver's eyes; the driver can see no farther ahead.
3. Increase space to the front. Although street lights and the lights of other vehicles will help, the changing intensity of the fog will make it extremely difficult to judge distances accurately.

Instructional Resources

A Resource Curriculum in Driver and Traffic Safety Education, pp. 45-47.

Learning Activities

4.1 Ask the candidates to describe what a driver can do to compensate for the limited visibility caused by fog.

Ask the question: Why is it dangerous for the driver to follow the taillights of a vehicle in front during heavy fog?

Candidate Resources

Suggested Content Outline

4.2 Visual limitations inside the vehicle:

A. The driver must realize that some visual limitations are built into the construction of the vehicle—inside rearview mirror, door and corner posts, sloping trunks.

B. Drivers can reduce the view obstruction hazard caused by parked and moving vehicles by maintaining a margin in traffic.

C. Drivers can reduce the problem of visual barriers like buildings, trees, blind corners, parked cars, or large trucks by expecting potential hazards behind these barriers. In rain, drivers need to be especially careful when following or passing large trucks that throw a spray of water.

D. The driver should be aware that a passenger sitting in the middle of the front seat may obsure the vision through the rearview mirror or obstruct the driver's check of the blind spot on his or her right.

Instructional Resources

A Resource Curriculum in Driver and Traffic Safety Education, pp. 24-26, 35, 65-67.

Learning Activities

4.3 Ask the candidates to name the forces of nature that affect vehicle control. In addition, ask them to explain how and when each one can influence the control a driver has over the vehicle.

Have the candidates write a description of traction factors that affect gripping efficiency of road surfaces. Have them write a short description of how driving strategies should be modified for each. Include such factors as: concrete, asphalt, gravel, dirt, loose sand and mud, snow and ice, rain, and tar.

Candidate Resources

Suggested Reading:

Drive Right, pp. 54-67.

Sportsmanlike Driving, pp. 151-172.

Suggested Content Outline

4.3 Limited traction:

Partial and complete loss of control occurs when the tires lose their rolling grip (traction) on the pavement. This happens in any one of the following ways:

1. Overpowering—Traction is reduced when your wheels are spinning, the consequence of overpower, usually on take-off. Overpowering on a curve allows centrifugal effect to take over. Factors that affect the way a vehicle behaves in a curve include:
    - Sharpness of curve
    - Bank of the curve
    - Speed of the vehicle
    - Condition of the roadway
2. Overbraking—Traction is lost when the wheels are skidding. Types of skids include:
    - Front wheel lock—steering is lost and the rear wheels act as a rudder pushing the vehicle straight ahead.
    - Rear wheel lock—the back end of the vehicle tries to pass the front end.
    - All-wheel braking skid—occurs when the driver panic brakes causing all four wheels to lock. The vehicle then plows ahead without control.
    - (Note: Changing to a lower gear on a slippery surface can start a skid.)

Instructional Resources

Film:

Your Car in Motion (ODHS)

Filmstrip:

Vehicle/Roadway Interaction (Aetna)

Film:

The Six Deadly Skids (Liberty Mutual)

Don't Skid Yourself (Aetna)

Winter Driving Tactics (ODHS)

Simulation Film:

Winterproof Your Driving (Aetna)

Learning Activities

4.3 Ask the candidates to state conditions that affect vehicle control on a curve.

Have the candidates describe the various types of skids. Ask the question: What is the basic cause for each skid? What solutions are best for bringing the vehicle back under control while skidding?

Candidate Resources

Information Sheet:
How to Handle Basic Skids (pp. 69-71)

Additional Reading:

Drive Right, pp. 226-227.

Sportsmanlike Driving, pp. 231-235.

LESSON 4: INFORMATION SHEET

Nighttime Driving Techniques

Driving at night is dangerous. The death rate (per mile traveled) at night is two and one-half times as great as the daytime rate. One of the major reasons for this is that drivers cannot see too well. The visibility of the roadway, other vehicles, pedestrians, and other potential obstacles is greatly reduced. Your objective is to learn to use special strategies for driving at night, ones that will help to compensate for conditions of reduced visibility.

At night, it is advisable to keep your eyes moving in a way that allows you to see and evaluate conditions ahead as far as possible and to keep your car on path (accurate tracking). Three techniques can help you do this:

1. Regularly scan ahead to the limits of your headlights range.
2. Periodically scan beyond your headlights range and use visible clues to evaluate traffic conditions and roadway features ahead. Taillights and headlights of other vehicles, street lights, and illuminated signs and signals, usually provide the most important clues; and
3. When necessary shift your eyes to near points to help in tracking.

Coordinating these techniques can help you to compensate, to some extent, for reduced visibility. In addition, they should help you to avoid the common error of staring at the brightly illuminated portion of the road ahead and becoming oblivious to the dimly lit surroundings.

Visible headlights and taillights of other vehicles provide important clues that help you to evaluate the situation ahead. Maintaining an awareness of the taillights of the vehicle ahead helps you to gauge the proper following distance and alerts you to curves in the road. When taillights increase in brightness, it means drivers are braking. Oncoming headlights provide advance warning of approaching vehicles and provide clues about road curvature ahead. Headlights approaching from the side allow you to detect intersecting vehicles early, and indicate the presence of intersecting streets.

However, it is important to be cautious in interpreting these clues. Often it is difficult to judge vehicle speed and roadway position when only headlights or taillights are visible. For example, taillights that may appear to be moving in the lane ahead, may actually be on a parked vehicle at the roadway edge.

When driving at high speeds and when conditions allow, use your high beams to increase visibility. Low-beam lights should provide visibility for at least 150 feet ahead; high-beam lights provide visibility for at least 450 feet ahead.

Nighttime Driving Techniques

Switch to low-beam lights well before meeting an oncoming vehicle and when following another vehicle. Most state laws require that you switch to low beams at least 500 feet before meeting another vehicle when following, at 300 feet or less. Otherwise your high-beam lights will shine directly into the eyes of the driver ahead. To reduce the glare in your own rearview mirror caused by the headlights of following vehicles, adjust your mirror to the night position.

When meeting an oncoming car, the glare from approaching headlights will reduce your ability to see. In such situations avoid looking directly at the headlights. Instead, use the right edge of the road as a guide for lane positioning, reduce your speed, and move to the right to provide an ample space cushion. After passing the vehicle it may take your eyes a few seconds to recover from the glare. It is usually advisable to maintain a reduced speed during this period. If the driver approaching from the opposite direction is using high-beams, switch briefly to high-beams then back to low-beams to signal him or her to lower his or her lights.

As a general rule, lower your speed to keep you stopping distance within the range of your headlights; in other words, don't overdrive your headlights. You may not always be able to do this, however, because you do have to adjust your speed to the normal speed of traffic in night driving to reduce the risk of being hit from the rear. This is especially important in night driving because it is more difficult for other drivers (to the rear) to judge your speed.

When the normal speed of traffic exceeds a speed that you believe is safe because of your headlight range, you have to decide whether to maintain a slower-than-normal speed, increasing the risk of being hit from behind; or to adjust to the normal speed, increasing the risk of not being able to stop in time to avoid hitting an obstacle in your path. This is one of the difficult decisions that drivers often have to make. (During practice driving, your instructor will help you to choose speeds which involve the least overall risk.)

Because it is so difficult to judge the speed and position of vehicles ahead at night, especially when you can only see the taillights leave an extra space cushion ahead. And because other drivers will have the same difficulty judging your speed position from behind, whenever possible avoid stopping in or near a traffic lane.

LESSON 4: INFORMATION SHEET

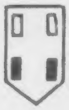
How to Handle Basic Skids

There are 6 basic types of skids that a driver will encounter. Although there is no absolute way to handle a particular skid, there are certain rules and techniques that can be applied to help control skidding. Four basic rules are:

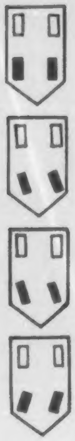
1.)Do not use the brake until steering control is re-established.
2.)Do not use power.
3.) De-clutch if you're driving a gear shift car.
4.) Countersteer to correct for the skid.

As you read about the six basic skids, you'll see why these four rules are so important.

KEY TO DIAGRAMS



rear wheel braking skid



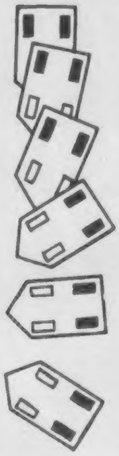
This skid is caused by unbalanced brakes. The front brakes may be out of adjustment—set up tighter than the rear brakes. When you brake hard, the front wheels lock up. As the car begins to skid, you suddenly find that you can't steer and, no matter how you turn the wheels, the car goes straight ahead. Skidding front tires can't turn the car.

When a car is in a front wheel braking skid, all of the available friction at the front tires is being used up by the skid. No cornering force can develop at the front wheels. At the same time, the rolling rear wheels act as a "rudder" to keep the car going in a straight line. If you've stepped on the brakes to get around an obstacle, you'll undoubtedly find the car skidding right into what you were trying to avoid.

What can be done about this skid? Get off the brakes. Let the tires re-establish rolling friction on their own. Countersteer by keeping your front wheels aimed straight ahead.

Be sure your brakes are properly adjusted, to help avoid front wheel braking skids.

front wheel braking skid



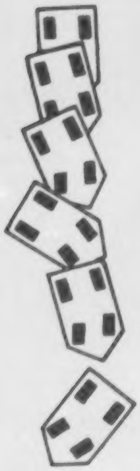
In this skid, the car spins 180° and ends up going backwards. Why? Because the sliding rear wheels can slide just as easily in any direction. As soon as the car turns slightly, the rear wheels slide sideways and spin the car around. One of the principal causes of this type of skid is brakes which are out of adjustment. This may cause the rear wheels to brake sooner and harder than the front wheels. When this type of skid occurs, get off the brakes and countersteer in the direction of the skid. With the brakes off, the tires can re-establish rolling friction and, by countersteering, you should be able to bring the car back in line.

Countersteering, turning the steering wheel in the direction of the skid, is probably the most important corrective step that anyone can learn. Up to a certain point, a car can be kept under control if you countersteer correctly. But your reaction to a skid must be fast and accurate. There is a critical angle, a "point of no return." If you haven't regained control of the car before it spins 15°-25°, you won't be able to keep it from spinning completely around.

Properly adjusted brakes will assist greatly in preventing both front and rear wheel braking skids.

How to Handle Basic Skids

all wheel braking skid

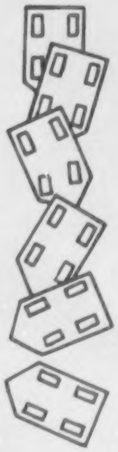


This is one of the most common skids, the skid that occurs even if the brakes are adjusted properly. It happens when you jam on the brakes too hard, causing all four wheels to begin to skid. The car can slide unpredictably in any direction.

It's very much like the front wheel braking skid, except that the rear wheels have lost their grip, too. Therefore, there's no "rudder" effect at the rear wheels to keep the car going straight ahead.

Correcting this skid is easy to understand but difficult to accomplish. Simply get off the brakes and let the tires re-establish rolling friction. This takes practice: when a car is in a violent skid, the natural reaction is to brake violently.

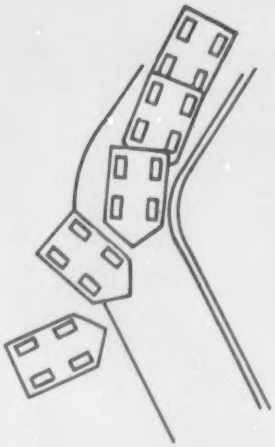
power skid



This skid is the result of accelerating too fast for the road conditions. Power applied to the driving wheels overcomes the grip of the tires, making them spin. And, when a tire is spinning, it has no friction to keep the wheels from slipping sideways. Generally, the car "fishtails"—swings back and forth. But if you're going fast enough, the slope of the road may cause the car to spin completely around. A car in a power skid essentially acts the same as a car skidding with its rear wheels locked.

To control a power skid, ease up on the accelerator, let the car stabilize itself, and countersteer.

power spin-out



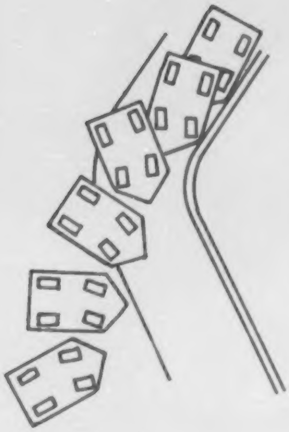
The most severe power skid can cause a power spin-out, triggered by accelerating through a corner. The change from rolling to sliding friction is sudden and violent; the car may spin completely around several times. Regaining control is very difficult. If you aren't ready for this reaction and don't correct for it immediately, the car will skid out of control. Attempt to regain control by keeping your foot off the gas and brake pedals and countersteering.

If the car is simply going too fast, and it is obvious that you cannot stay on the road, try to aim the car for a clear spot where you can stop without hitting anything. Countersteering at the right time can make the difference between hitting a tree and skidding into an open field. Stab braking may be helpful in this situation.

Above all, remember to reduce your speed before going into a turn.

How to Handle Basic Skids

spin-out



Spin-outs happen for several reasons. You're rounding a corner and hit a patch of ice or loose gravel. Or you suddenly discover that the corner is sharper than you had thought it was. In either situations, as you try to keep the car on the road, the rear tires break loose and the car whips around. The dynamics of this skid are easy to understand. If you've ever seen a chain of skaters playing "crack the whip," you've seen the principle involved in a spin-out. When the lead skater suddenly stops, the rest of the chain is "whipped" around him. Like the lead skater, the front tires of a car being driven through a corner are the pivot points for the rear tires to swing around. This means that the side thrust is greater at the rear tires. The cornering forces at the rear wheels overcome the friction of the tires and the car spins.

The spin-out is a very difficult skid to control. Keeping the car on the road and pointed in the right direction may be the best you can hope for. Countersteer—keep the car pointed in the right direction—if you can do so and still keep the car on the road. You can avoid this type of skid by never taking a curve too fast for the conditions.

LESSON 4: INFORMATION SHEET

Hydroplaning

Hydroplaning takes place when driving on wet roads. At speeds up to 35 mph, most tires will wipe the road surface in much the same way as a windshield wiper clears the windshield. But, as the speed increases, the tires cannot wipe the road as well and start to ride on a film of water just like a set of water skis. In a standard passenger car, partial hydroplaning starts at about 35 mph and increases with speed to about 55 mph, at which point the tires can be totally up on the water. In a severe rainstorm, for example, the tires may not touch the road at 55 mph. If this is the case, there is no friction available to brake, accelerate or corner. A gust of wind, a change of road contour, or a slight turn can cause an unpredictable and uncontrollable skid.

To prevent hydroplaning the best thing to do is to take your foot off the accelerator and let the car slow down. If you skid while your car is only partially hydroplaning, you should be able to regain control by correcting for the particular type of skid that occurs. On the other hand, if you're totally hydroplaning, about all you can do is release the accelerator and ride out the skid.

To further prevent hydroplaning it is most helpful to have tires with deep treads. The treads allow the water to escape from under the tires and tend to prevent complete hydroplaning at normal highway speeds. However, when the depth of water exceeds the depth of treads, complete hydroplaning can be expected at speeds from 50-60 mph.

(Page 1 of 2)

LESSON 4: DISCUSSION SHEET

Review Situations

Instructions: Assume that you are the driver of the car in each of the following situations. Consider the situations and then decide how you would respond. Discuss the decisions.

Situation 1	Response: Situation 1
You're parked in the street in front of your house and it's been snowing for quite a few hours. Snow has piled up around and on top of the car. What should you do before you get in the car? Why?	I would remove snow from all windows, headlights, taillights, outside mirrors, etc., to improve visibility. If car won't move, remove snow from in front of and behind each wheel with a shovel. If shovel is not available, remove snow with baseplate of jack.
Situation 2	Response: Situation 2
You're driving 45 mph in the city, it has been raining for some time, and you can see water covering the roadway ahead. What might happen? What steps should you take to prevent it from happening?	Hydroplaning may occur. I would drive at a slower speed and increase following distance. If tires makes a slushing sound, driver should decelerate quickly.
Situation 3	Response: Situation 3
You're stuck in deep snow. You've removed the snow from around the wheels and done all the proper things for trying to move the car and it's still stuck. What should you be sure **not** to do? Why?	I would not sit in the car with the windows closed and the engine running because of the possibility of carbon monoxide poisoning.

Situation 4	Response: Situation 4
It has been snowing for some time. You're driving in the country and as you round a curve in the roadway you encounter a snow drift. It is not possible to steer around the drift. What procedures must you take to get the car through the drift?	I must: (1) shift into lower gear before entering the deep snow; (2) accelerate slowly to avoid spinning the rear wheels; (3) keep the front wheels straight; (4) rock the car by attempting to keep the car moving. Drive the car as far as possible and stop the car on the hill created by the snow in front of the wheels. When the car is stopped by the hill, shift into reverse and back up. Continue this procedure until car has a sufficient path to proceed.
Situation 5	Response: Situation 5
It's cold and has been raining for some time. The roadway is really slick. There are lots of things to remember when accelerating on slippery surfaces. What are they and why should you perform these procedures?	They are: (1) drive more slowly than on dry pavement (excessive speed may splash water over the engine ignition system, causing the engine to stall); (2) increase following and lateral distance from other vehicles; (3) maintain smooth and even acceleration avoiding jerky accelerator movements (major acceleration changes may spin the rear wheels and cause the car to start skidding; taking the foot off the accelerator may create an effect similar to application of the brakes); (4) approach curves and intersections slowly; (5) maintain a constant speed or accelerate slightly on the approach to an ice-covered upgrade—maintain constant pressure on the accelerator on the upgrade; (6) maintain speed and direction with as little change as possible when driving over patches of ice in the roadway.

83

LESSON 5: Testing

Time: 1 1/4 Hours

Overview: This test instrument is related to Lesson 3. The entire test format highlights various test arrangements. The entire test should be used. This test is similar in nature to the one a beginning driver takes to pass the temporary license test; it is, however, longer and more difficult. It is recommended that 70 points be considered a passing grade. Any candidate failing to achieve this score the first time, should be asked to take a second test.

LESSON OBJECTIVE: The candidates will demonstrate comprehension of the knowledge gained in Lesson 3 regarding signs, signals, pavement markings, right-of-way laws, and speed regulations by achieving the recommended passing grade.

The test includes:

Part A: Identification of Colors, Shapes, and Messages or Symbols
Part B. Identification of the Correct Message or Meaning
Part C: Multiple Choice
Part D: Identification of Correct Shape and Words, Figures or Symbols
Part E. Multiple Choice

Total number of points: 86

Part A: Identification of Colors, Shapes, and Messages or Symbols

1. Identify the eight basic colors used for signs.

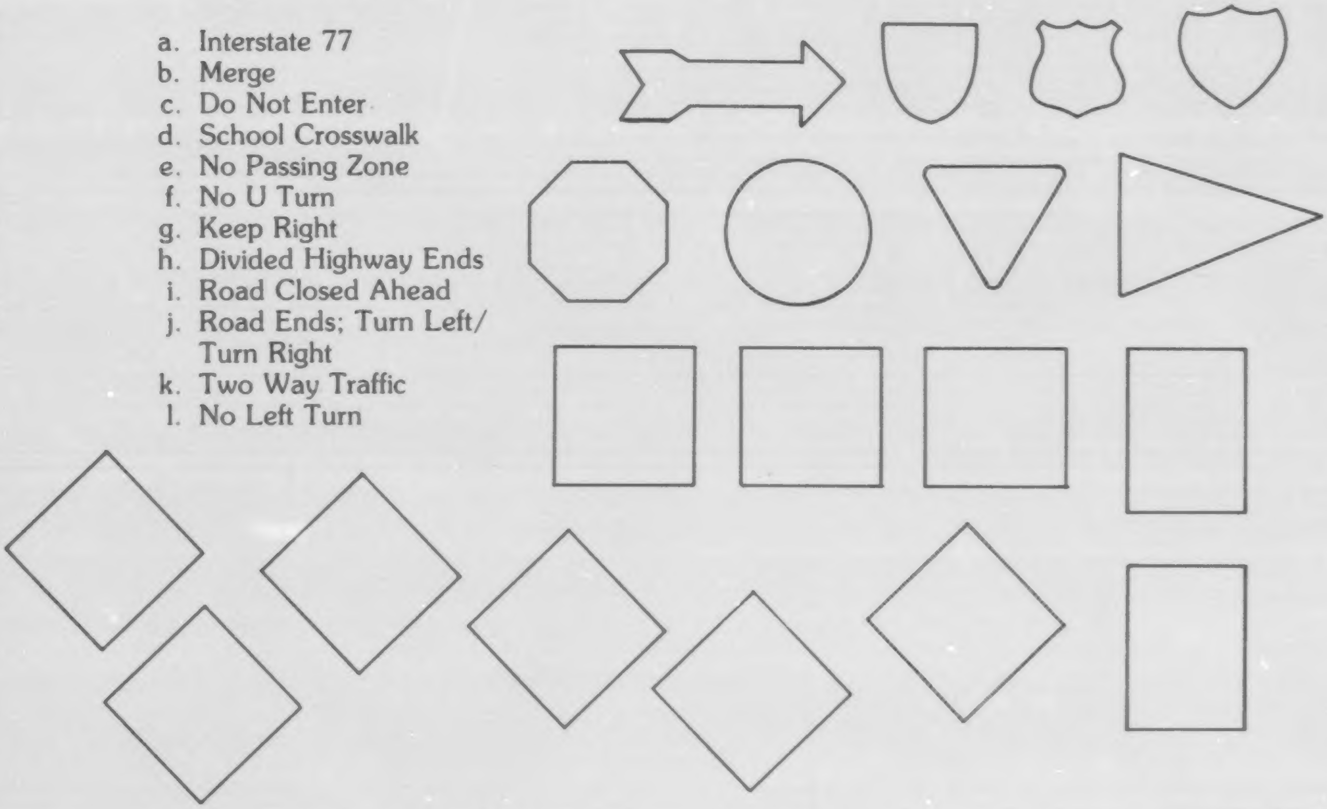
1.	5.
2.	6.
3.	7.
4.	8.

2. Draw the eight basic shapes used for signs.

1.	2.	3.	4.
5.	6.	7.	8.

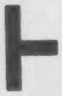
3. From the list of message or symbol descriptions below, write or draw the appropriate message or symbol inside the appropriate shape (design). Both written and symbolic messages must be identified correctly to receive credit. (Note: There are more shapes than messages.)

a. Interstate 77
b. Merge
c. Do Not Enter
d. School Crosswalk
e. No Passing Zone
f. No U Turn
g. Keep Right
h. Divided Highway Ends
i. Road Closed Ahead
j. Road Ends; Turn Left/ Turn Right
k. Two Way Traffic
l. No Left Turn



Part B: Identification of Correct Messages or Meaning

Directions: For each of the symbols pictured below, write the correct message or meaning.

1


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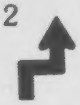

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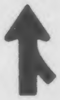

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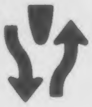

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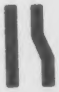

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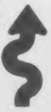

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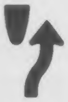

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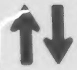

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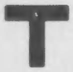

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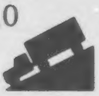

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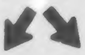

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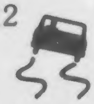
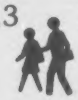
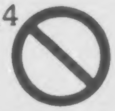


13


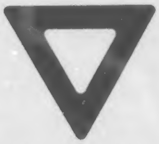
14


1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________
11. ______________________________
12. ______________________________
13. ______________________________
14. ______________________________

Part C: Multiple Choice

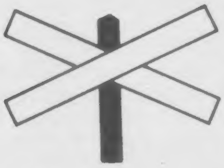
Directions: Circle the letter that best describes the sign, signal or pavement marking pictured.

1.



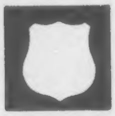
a. Yield right-of-way
b. Stop
c. Slow moving vehicle
d. Do not pass

2.



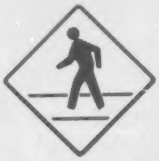
a. Crossroad
b. Junction
c. Railroad crossing
d. Railroad ahead

3.



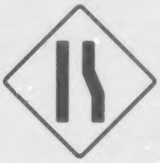
a. Interstate route
b. County route
c. U.S. route
d. State route

4.



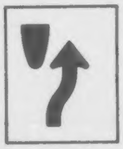
a. School crossing
b. School zone ahead
c. Pedestrian crossing
d. Flagperson

5.



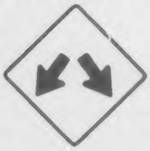
a. Merging traffic
b. Road narrows
c. Keep left
d. Right lane ends

6.



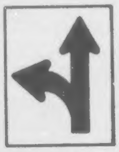
a. Keep right
b. Exit to right
c. Divided highway
d. Left lane ends

7.



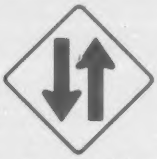
a. Divided highway
b. Highway divides
c. Merging traffic
d. Exit right or left

8.



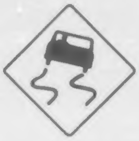
a. Divided highway
b. Merging traffic
c. Exit to the left
d. Go straight or turn left

9.



a. Divided highway
b. Two way traffic
c. Highway divides
d. Go straight only

10.



a. Winding road
b. Curve ahead
c. Slippery when wet
d. None of these

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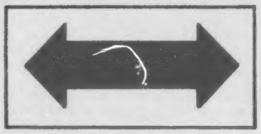
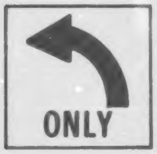
Part C: Multiple Choice (continued)

11.



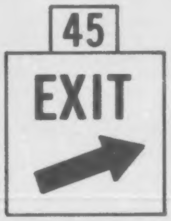
a. Road ends
b. Crossroads
c. Road goes left or right
d. Route goes left or right

12.



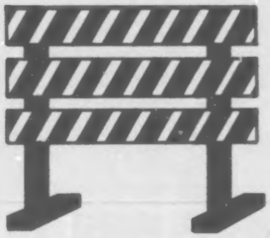
a. Left turn only
b. Route turns left
c. One-way to left
d. Exit to the left

13.



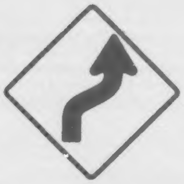
a. Slow to 45 mph after exit
b. Slow to 45 mph before exit
c. This is exit 45
d. Next town is 45 miles

14.



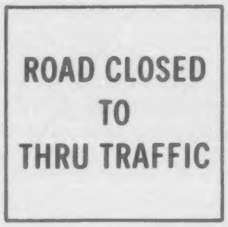
a. Go left around barricade
b. Go right around barricade
c. Go either direction
d. Do not enter

15.



a. Road widens ahead
b. Prepare to go right and then left
c. Road closed ahead, go right
d. Barricade ahead, prepare to detour

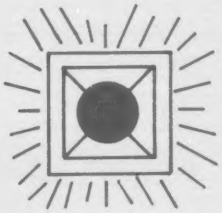
16.



a. Road opened only for local traffic
b. No vehicles are permitted past this point
c. Play street, do not enter
d. Large trucks are not permitted to enter

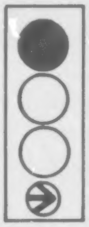
17.

yellow



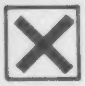
a. Slow down and go with caution
b. Slow down only if other traffic is near
c. Stop, look, and go when clear
d. Stop, and stay until light stops flashing

18.

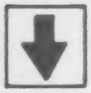


a. Turn right after stopping
b. Turn right after checking traffic
c. Turn right after red light changes
d. Turn on green light

Part C: Multiple Choice (continued)

19.
The red  lane signal means

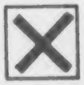
a. Stop and yield
b. Stop and wait for green arrow
c. Never drive in lane under sign
d. Dangerous crossing ahead

21.
The green  lane signal means

a. Go straight ahead only
b. Do not change lanes
c. Use this lane
d. All of these

23.
The double solid white lane line

a. Should not be crossed except with due care
b. Should not be crossed any time
c. Does not allow lane changing
d. Does not allow left or right turns

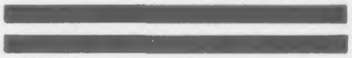
20.
The yellow  lane signal means

a. You may turn left from this lane
b. Lane signal is changing to red
c. Prepare to change lanes
d. All of these

22.
Solid lines are used for

a. No passing zones
b. Edge lines
c. Stop lines
d. All of these

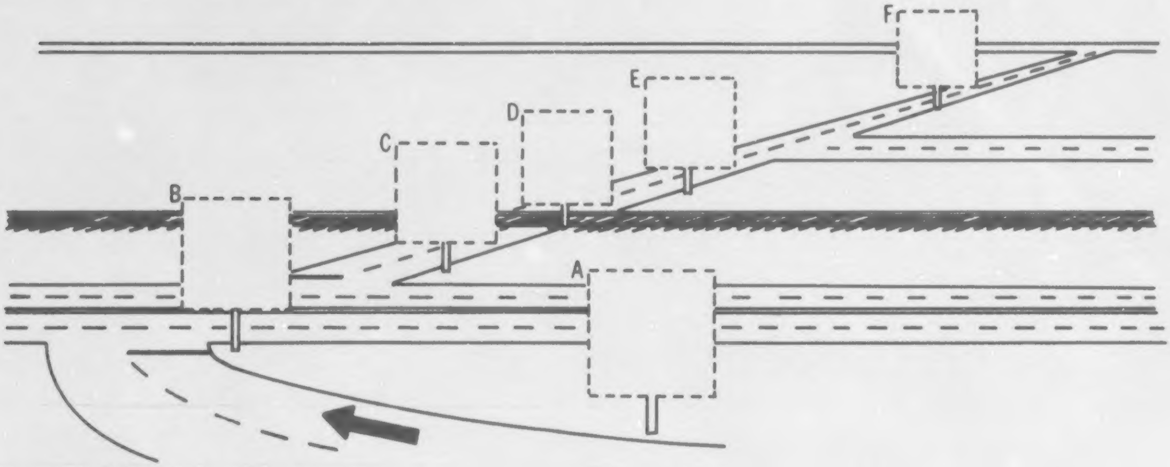
24.
You may not drive across solid yellow lines except to



a. Change lanes
b. Turn left
c. Turn right
d. Make a U-turn

Part D: Identification of Correct Shape and Words, Figures or Symbols

Directions: Imagine you are driving in the direction of the arrow. Inside the dotted lines (A through F), draw the correct **shape** and complete the sign with the correct **words, figures or symbols**. (Allow one point for each shape correctly drawn and one point for each correct word, figure, or symbol within each shape—a total of 12 points.)



Part E: Multiple Choice

Directions: Choose the best answer for each question. Put a circle around your selection.

1. Unless marked otherwise, the speed limit on rural highways is
   a) 40 mph b) 45 mph c) 55 mph d) 60 mph.

2. On school days when children are present, the speed limit for school zones is
   a) 20 mph b) 25 mph c) 30 mph d) 35 mph.

3. When using the basic speed law as a guide, the choice of speed will be based on the
   a) fixed speed limit b) feel of car being driven c) speed of other drivers d) traffic and road conditions.

4. The right-of-way law provides us with
   a) our basic rights as drivers b) rules for turning right c) rules for when to yield to others d) principles and road conditions.

Multiple Choice (continued)

5. Right-of-way rules help

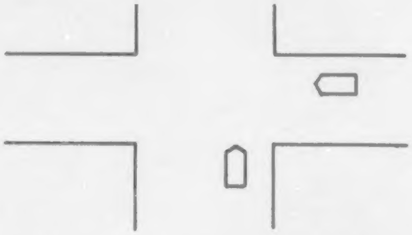
   a) those who wish to use the same space at the same time b) drivers decide who should go first c) decide who has the right to go safely d) all of the above.

6. At an intersection with no control devices, two cars approach from opposite directions. Which driver must yield?

   a) The driver turning left. b) The driver turning right. c) The driver going straight. d) The driver there first.

7. At an intersection with no traffic control devices, two cars approach at right angles to each other. Which driver must yield?

   a) The driver who gets there first. b) The driver who slows first. c) The driver who gets there last. d) Both drivers.



8. A car is positioned in an intersection waiting to turn left when the traffic signal light turns red. Who should get to go first?
   a) The driver with the green light. b) The driver who moves first. c) The driver making a right turn. d) The driver caught in the intersection waiting to turn left.

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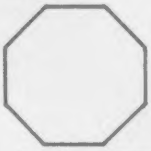
TEST

Answer Key

Part A

1. Red
2. White
3. Yellow
4. Orange
5. Green
6. Blue
7. Brown
8. Black

1.


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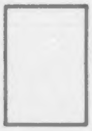

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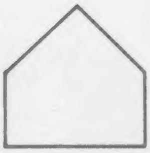
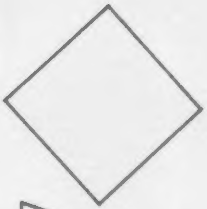
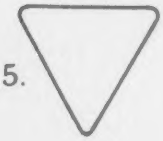
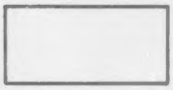


4.


5.


6.


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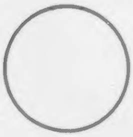

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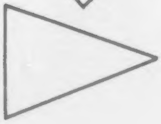
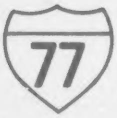
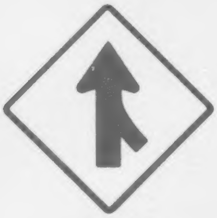
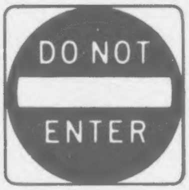
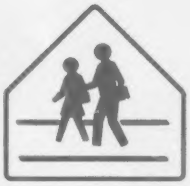
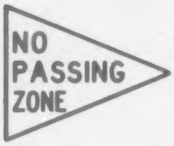


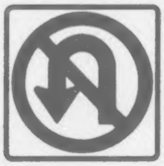
a.


b.


c.


d.


e.


f.


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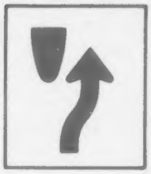

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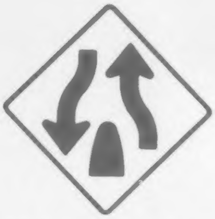

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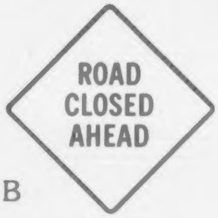

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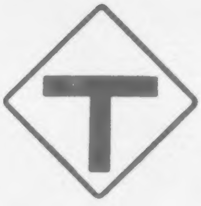

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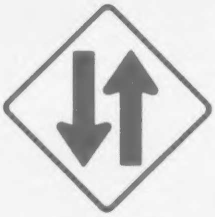

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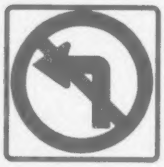


Part B

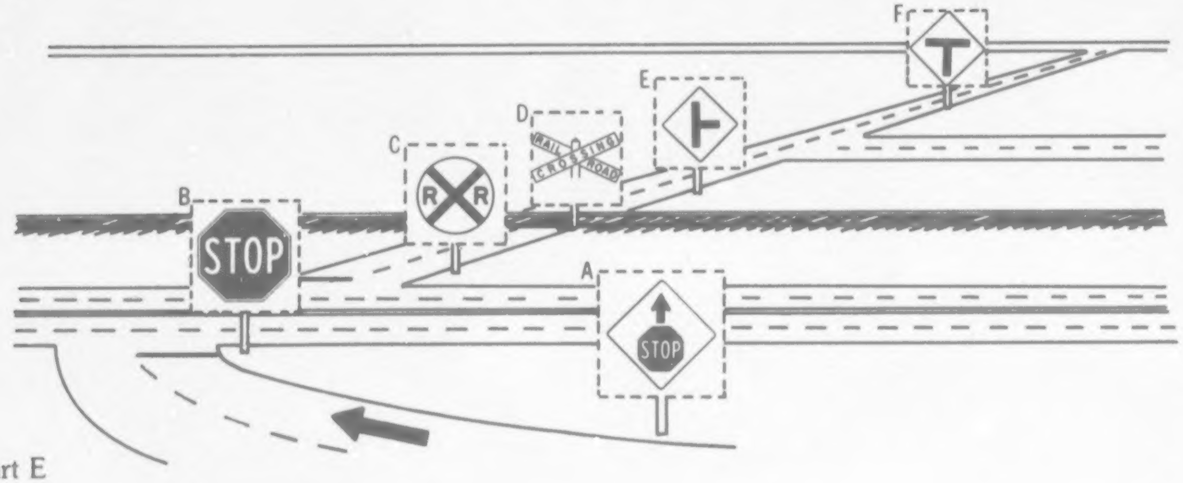
1. Intersecting (side) road to the right
2. Sharp right turn then left turn
3. Merge
4. Divided highway ahead
5. Right lane ends ahead
6. Winding curves (road)
7. Keep right
8. Two way traffic
9. Road ends; turn left/turn right
10. Hill
11. Obstruction ahead; go right or left
12. Slippery when wet
13. School
14. Do Not Restriction

Test Answer Key (continued)

Part C

1. a
2. c
3. c
4. c
5. d
6. a
7. b
8. d
9. b
10. c
11. c
12. a
13. c
14. a
15. b
16. a
17. a
18. b
19. c
20. c
21. a
22. d
23. b
24. b

Part D



Part E

1. c
2. a
3. d
4. c
5. d
6. a
7. c
8. d

LESSON 6: Basic Vehicle Control Tasks

Introduction: This unit will provide actual driving experiences for each candidate. The content includes the basic vehicle control tasks required of the driver and serves as the foundation for driving instruction in that normal driving tasks and task requirements (i.e., perception, judgment, and decision-making) cannot be effectively learned until procedures for basic tasks are mastered. This unit uses classroom, simulation, and behind-the-wheel instructional methods. The time allocated for each method is as follows:

- Classroom: 1 1/2 Hours
- Simulation: 2 Hours
- Behind-the-Wheel (Skill Activities): 3 1/2 Hours

It is suggested that all Lesson 6 instructions be conducted in the recommended sequence. However, if the availability of facilities and equipment prevents using the recommended sequence, the instructional schedule may be altered to meet the immediate needs of the candidates. (Note: Skill activities can be performed on a large parking lot, instead of a driving range. A large megaphone or pre-arranged hand signals can be used for communication.)

In order to make the best use of the time in behind-the-wheel activities, each candidate will be required to learn the procedures for each maneuver. Each candidate should also understand the importance of sequencing instruction based on maneuver requirements in a behind-the-wheel instructional program.

Instructional Content

1. Classroom Instruction

The first one and one-half hours of instruction will take place in the classroom. Teacher-led presentations and discussions will outline the sequence and give the rationale for the order of each task. Each candidate will be asked to identify the sequence requirements for each maneuver. Demonstration of each sequence will take place later in both simulation and range experiences.

Basic Performance Tasks

- Pre-driving checks
- Preparatory steps
- Starting procedures
- Moving vehicle forward
- Tracking and Speed Control forward
- Tracking and Speed Control backward
- Lateral movements
- Stopping and Braking
- Turns (left and right)
- Turnabouts
- Parking procedures

2. Simulation Instruction

The second phase of instruction will be spent in simulation. Parts of the first hour will incorporate non-film drills in order to give candidates time to apply basic control procedures in actual practice. The remainder of the first hour and the entire second hour will provide candidates necessary time, under guided simulation instruction, to practice basic vehicle control tasks.

Simulation Driving

- Purposes of simulation (brief)
- Equipment explanation
- Human functions
- Turns (left and right)
- Backing

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3. Behind-the-Wheel (Skill Activities)

The final three and one-half hours will be spent in behind-the-wheel instruction. The session activities are designed to be taught on a large parking lot (range if available) and to accommodate at least six vehicles with two candidates assigned to each vehicle. Each candidate will operate the vehicle for half the allotted time. When not driving, each candidate will observe his or her partner.

Behind-the-Wheel Instruction

- Communication procedures
- Vehicle familiarization and location of controls
- Forward moving and stopping
- Backing straight
- Forward weaving
- Tracking straight
- Turns (left and right)
- Brake modulation

(Note: An illustrative diagram of the behind-the-wheel skill activities is provided following this lesson.)

Time: 7 Hours

Overview: The actual control of the automobile is dependent upon the driver's ability to operate the vehicle safely and efficiently. Since timing and coordination are critical in driving, these skills and abilities need to be developed into fixed habits before the driver can operate in traffic with any degree of safety. For efficient and effective learning of such skills, it is necessary that candidates have a thorough understanding of the purpose for each basic vehicle control task and the reasons for given sequential procedures.

LESSON OBJECTIVE: The candidate will identify, explain and operate the vehicle control systems, safety devices and accessories, and demonstrate the proper driving procedures and skills for basic vehicle maneuvers.

Instructional Concepts

1. The key to tracking in a straight line is to look well ahead of the intended path of travel.

2. When tracking on turns, the exact amount and timing of steering corrections is determined by looking through the intended turn to the point the driver wants the vehicle to reach.

3. The hand-over-hand steering method provides maximum steering control when turning or recovering from a turn.

4. In order to avoid blind spots and distortions when backing, it is essential to look directly back through the rear window rather than in the rear-view mirror.

5. Speed should always be carefully controlled when backing, but particularly when room to maneuver is limited.

6. Smooth braking requires a sense of timing and the ability to regulate pressure on the brake pedal.

7. Turnabouts should be made only in areas with adequate room and visibility.

8. Parking requires controlled maneuvering. Adequate space and the driver's ability to see are important steps to successful parking.

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Suggested Content Outline

6.1 Classroom Instruction:

Driving maneuver procedures: Discuss the sequence for each maneuver. Utilize the handout materials (Information Sheets) for discussion.

A. Predriving Checks
B. Prestart Checks

Instructional Resources

In-Car Instruction: Methods and Content, pp. 76-85.

Information Sheet:
Driving Maneuver Procedures (pp. 99-108)

Pamphlet:
Automotive Safety Belt Fact Book (U.S. DOT)

Transparencies:

Proper Driving Position (T-16)

9-3 Hand Position (T-17)

Diagram of Mirror Adjustment (T-18)

Suggested Film:

UFT (ODHS)

Learning Activities

6.1 Ask the questions:

- Why is it a good idea to have a set order of predriving and prestart procedures?
- What are the arguments for and against always entering the car from the curb side?
- What are some of the problems that are created when drivers enter from the driver's side in traffic?

Candidate Resources

Suggested Readings:

Learning to Drive, pp. 21-33.

Drive Right, pp. 34-41.

Let's Drive Right, pp. 14-20.

Safe Performance Driving, pp. 17-31.

Information Sheet:
Driving Maneuver Procedures

Suggested Content Outline	Instructional Resources
C. Starting procedures	Information Sheet: Driving Maneuver Procedures (p. 99)
D. Moving procedures (forward)	*In-Car Instruction: Methods and Content*, pp. 88-98, 108-123. Information Sheet: Driving Maneuver Procedures (p. 100)
E. Establishing a path	Information Sheet: Driving Maneuver Procedures (p. 100) Transparency: Intended Path of Travel (T-19)
F. Stopping the vehicle: Point out that for efficient braking, pressure should be increased gradually on the pedal to use as little pressure as necessary to stop in the required distance or time. The various types of braking actions may be defined as follows: • Cover brake—placing foot over the pedal with no pressure on brakes.	Information Sheets: Driving Maneuver Procedures (p. 100) *Understanding Your Brakes* (p. 113)

Learning Activities	Candidate Resources
6.1 Ask the questions: • What types of problems do many beginning drivers encounter when they try to establish their intended path of travel? • What is meant by the terms oversteering, weaving, and driving off-center? • What causes the greatest problem when tracking on a forward path?	Information Sheets: Driving Maneuver Procedures *Understanding Your Brakes*

Suggested Content Outline	Instructional Resources
- Light braking—a slowing down of the vehicle by slight pumping action of the foot.	
- Smooth braking—results from gradual pressure on the brake pedal until the pedal can go no further.	
- Quick stop—consists of a hard and quick push on the brake pedal as far as it will go and hold. The wheels will probably lock and the tires will skid until stopped.	
- Discuss the good points and bad points to left-foot braking. Stress that left-foot braking is not wrong or bad, but an acceptible method for braking. However, emphasize that only those with more advance driving experience should use this method at first.	Information Sheet: Left-Foot vs. Right-Foot Braking (p. 114)
G. Securing procedures	Information Sheet: Driving Maneuver Procedures (p. 100)
H. Entering from the curb	Information Sheet: Driving Maneuver Procedures (p. 101)

Learning Activities	Candidate Resources
6.1 Ask the candidates to describe the techniques for each of the following and when they would be used: covering the brake, light braking, and quick braking. Have the candidates compare the advantages and disadvantages of left-foot vs. right-foot braking. Divide into groups for discussion. Have each group report its findings.	Information Sheets: Left-Foot vs. Right-Foot Braking Driving Maneuver Procedures

Suggested Content Outline	Instructional Resources
I. Lane changing procedures	*Learning to Drive*, pp. 121-130. Information Sheet: Driving Maneuver Procedures (p. 102) Filmstrip: *Protecting Your Margin of Safety* (Ford)
J. Right turn procedures	Transparencies: Turning Movements (T-20) Visual Habits for Turning (T-21) Information Sheet: Driving Maneuver Procedures (p. 103)

Learning Activities	Candidate Resources
6.1 Ask the candidates to describe situations where lane changes would be appropriate. Ask the candidates to identify the necessary visual techniques they would use in performing a safe lane change in city traffic. Ask the candidates to describe why the hand-over-hand steering technique is the superior method for making turns.	Suggested Reading: *Sportsmanlike Driving*, pp. 40-42. Information Sheets: Driving Maneuver Procedures

Suggested Content Outline	Instructional Resources
K. Left turn procedures	Transparencies: Turning Maneuvers (T-20) Visual Habits for Turning (T-21) Information Sheet: Driving Maneuver Procedures (p. 104)
L. Backing procedures Walk completely around car before backing.	*In-Car Instruction: Methods and Content*, pp. 117-134. Information Sheets: Driving Maneuver Procedures (p. 105) Safe Backing Practices (p. 117)

Learning Activities	Candidate Resources
6.1 Ask the candidates what is meant by 'looking through' the turn one is about to make. Why is it a good method to use? What problems occur when a beginning driver tries to follow the hood (front) of the car when making turns? What are some of the visual problems associated with making left and right turns? Which turn would be the hardest to teach a beginning driver? Why is it advisable to travel at especially slow speeds when backing? What problems occur most often when beginning drivers start backing?	Suggested Reading: *Learning to Drive*, pp. 64-78. Information Sheets: Driving Maneuver Procedures

Suggested Content Outline	Instructional Resources
M. Three-point turnabout (Y-turn)	Information Sheets: Driving Maneuver Procedures (p. 106)
N. Angle parking (Entering and Leaving)	Driving Maneuver Procedures (p. 107)
O. Perpendicular parking (Entering and Leaving)	Driving Maneuver Procedures (p. 108)
6.2 Simulation Instruction: A. Simulation 1—The first hour is a non-film session designed to familiarize candidates with the basic vehicle control tasks, enabling them to apply these procedures under guided instruction.	

Learning Activities	Candidate Resources
6.1 Ask the question: • Where are three-point and U-turns prohibited by law? • What are the reasons for these restrictions? • Why is going around the block the best way to turn around? • Why is it safe to go to the right when going around the block? • What kinds of parking are permitted in most communities? • What kind of parking is most difficult? Why?	Suggested Reading: *Learning to Drive*, pp. 61-69. Information Sheets: Driving Maneuver Procedures

Suggested Content Outline	Instructional Resources
1. During initial practice emphasize the following items: a. Driver position b. Steering—proper hand position c. Vehicle preparation d. Hand-over-hand steering method e. Signaling intentions f. Visual target—intended path of travel 2. Include a short introduction to the purposes of simulation, equipment explanation, and location of various controls and how they relate to the driving task.	
B. Simulation 2—Turning 1. Emphasize key components for making successful left and right turns. • turn procedures • appropriate lane selection • vehicle position • intended path of travel 2. Present an overview of film covering its objectives and main points.	Simulation Film: *Fundamental Turning Maneuvers* (Aetna) Slides: Depict various local intersections.

Learning Activities	Candidate Resources
6.2 Have the candidates demonstrate the proper prestart procedures. Drill candidates on start and stop procedures. Talk the candidates through each basic vehicle control task. Ask the candidates to review on their own with a partner observing. Show slides of various local intersections where trouble might be encountered in turning right or left. Ask the candidates to identify critical elements necessary for making safe right and left turns.	

Suggested Content Outline	Instructional Resources
6.3 Behind-the-Wheel Instruction	Information Sheet: Basic Control Range Skills (Diagram)

Learning Activities	Candidate Resources
6.3 With vehicles in a line and on the instructor's command, have the candidates locate and activate the following controls: horn, left and right signal, brake light (release park brake and reset), gear selector lever (ignition turned to "on" position), lights, and speedometer. With the vehicles still in line, have the candidates assisted by candidate observer perform predrive checks when instructed and alone. (Task1) With the vehicles still in line, have each candidate start the engine. Repeat with the candidate observer evaluating the procedures. (Task 2) With the vehicles still in line, explain how communication will take place on the range (parking lot). Explain that when communications are understood, the driver should flash headlights. If the communication is unclear, the candidate should turn on lights and stop. (Task 3) With vehicles in line, have each move forward one at a time for approximately 50 feet. Continue with group drill: move and stop about every 50 feet until the end of the range (parking lot) is reached. (Task 4) Back, repeating the same procedures as above. (Task 5) Set up serpentine courses (Range Diagram) with the cones approximately 75 feet apart. Have the candidates proceed around the range and through the cones on opposite sides of the range at 10 to 12 mph. Emphasize maintaining a safe following distance. (Task 6)	Information Sheet: Basic Control Range Skills (Diagram)

6.3 Have candidates drive in a straight line on the outside of the range (parking lot), maintaining a safe following distance, following a good tracking path (within the marked lane). When candidates get to the end of each lane have them make gradual left turns. Repeat for right turns too. Repeat the same procedure, only make the outside course smaller to make the left and right turns much more difficult. (Task 7)

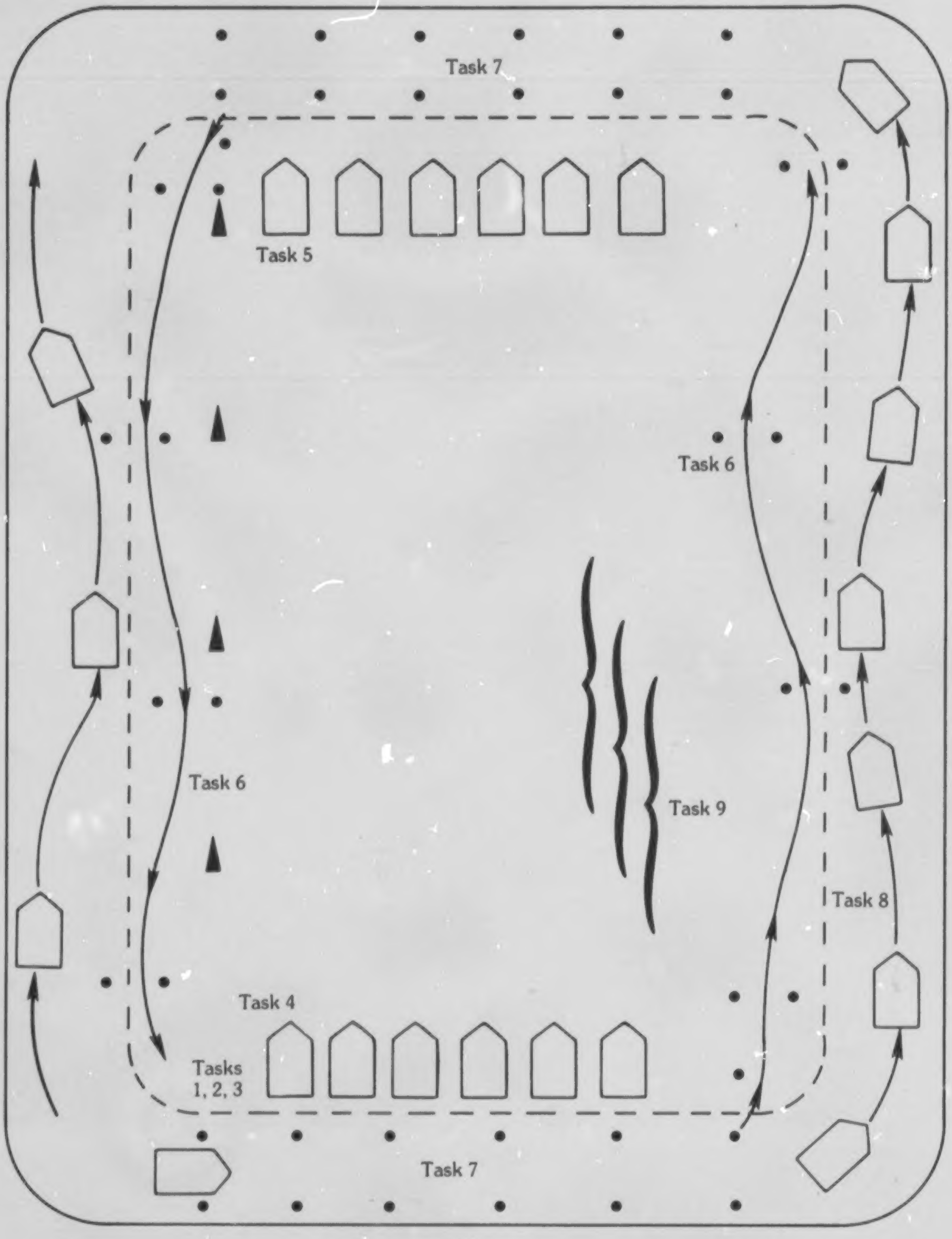
Have the candidates drive around the outside of the range at 10-15 mph, maintaining a safe following distance. On each long straight path have them make a lane change to the left and a lane change back to the right before they reach the turn. (Emphasize the correct procedures.) (Task 8)

With the vehicles in a straight line at one end of the range (parking lot), have the entire group move forward across the range at speeds of 10 mph, 15 mph, and 20 mph. With each speed selection, have the students brake gradually and come to a controlled stop the first time. On the second practice, have them brake hard. Make sure that each driver keeps the vehicle in a straight line when braking hard. Repeat the same practices at increased speeds (15 mph and 20 mph). (Task 9)

Note: When the first group has completed the nine tasks, switch drivers. Repeat the entire sequence.

If time permits, after two complete cycles, have each candidate instruct the other candidate (partner in car) through the first five tasks.

Behind-the-Wheel Skill Activities



LESSON 6: INFORMATION SHEET

Driving Maneuver Procedures

A. Predriving Checks

1. Checks to be made outside the vehicle (car)
   - direction of front wheels (pointed in straight direction)
   - objects around vehicle removed
   - pedestrians, especially small children checked
   - windows are clean
   - tires have adequate pressure
2. Checks to be made inside the vehicle
   - key placed in ignition
   - parking brake "on"

B. Prestart Checks

1. Doors locked
2. Seat adjusted
   - heel of foot should reach bottom of accelerator pedal
   - left foot can reach dimmer switch
   - hands can be positioned comfortably at the "9-3" position
3. Mirrors adjusted
   - inside mirror set to view directly behind and slightly to the right
   - side mirror set for view of left lane
4. Seat belt and shoulder strap fastened

C. Starting Procedures

1. Press accelerator pedal once to the floor to set the automatic choke.
2. Press left foot on brake.
3. Turn ignition key to start position while right foot applies slight pressure to the accelerator pedal.

4. Check gauges—All red lights off? All systems go?

D. Moving Procedures (Forward)

1. Press left foot on brake (service).
2. Move selector lever in "D" position.
3. Give proper signal (indicator).
4. Check inside and outside mirrors for traffic.
5. Check blind spot over proper shoulder.
6. Release park brake.
7. Press gently on accelerator pedal while slowly releasing left foot from brake (service).
8. Move into the appropriate lane and cancel signal.

E. Establishing a Path

1. Accelerate smoothly.
2. Look ahead of vehicle to center of driving path (at least one block ahead in the city).
3. Steer only to maintain vehicle on path with minor (small) steering corrections left or right.

F. Stopping the Vehicle

1. Check for traffic behind in mirrors.
2. Release pressure on accelerator pedal while steering slightly to the right toward the curb.
3. Brake to a complete stop.

G. Securing Procedures

1. Place selector lever in "P" position (make sure left foot is on the brake).
2. Turn ignition key to "off."
3. Remove key from ignition.
4. Lock doors after leaving vehicle.

H. Entering from the Curb

1. Check ahead for a clear path (open lane) to enter traffic.

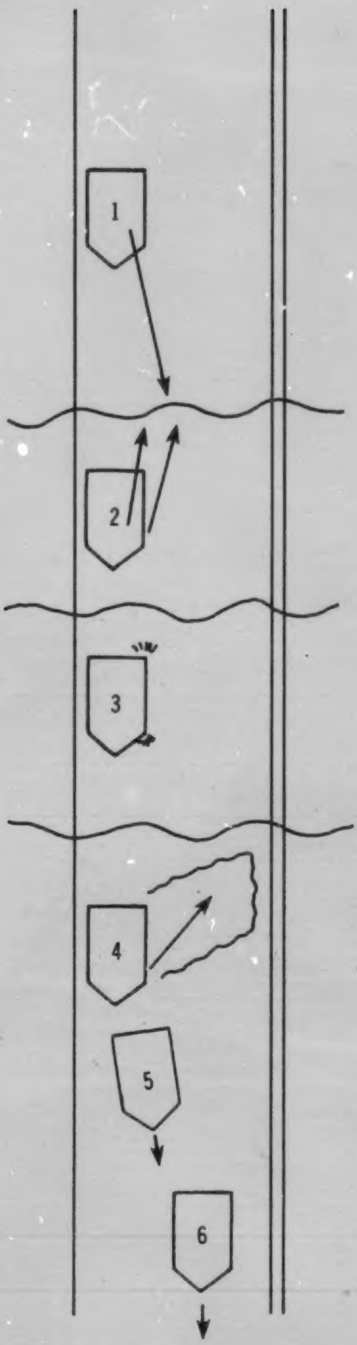
2. Check both inside and sideview mirrors.

3. Signal intention to enter traffic.

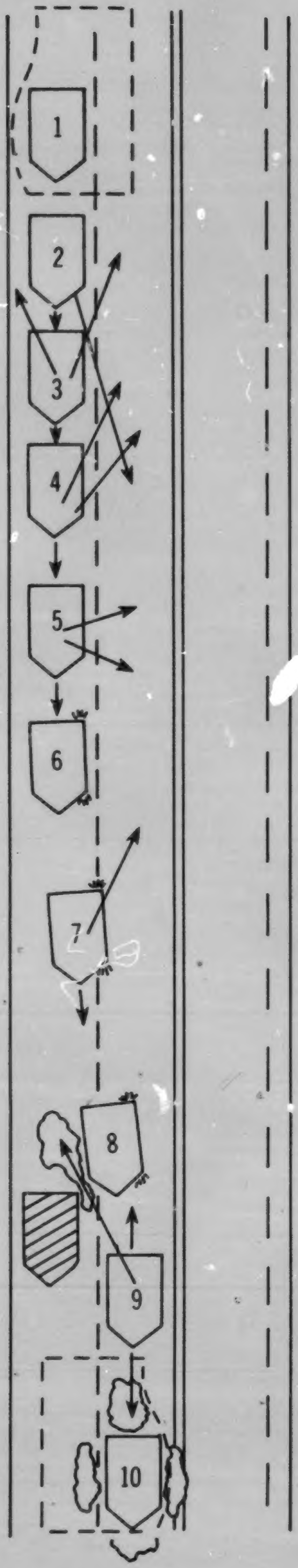
4. Check blind spot over appropriate shoulder before entering traffic.

5. Accelerate smoothly.

6. Make small steering corrections to center vehicle in center of lane.



I. Lane Changing to the Left



1. Scan critical area.
2. Scan well ahead.
3. Check to rear (mirror), recheck front.
4. Check left rear and side (mirror), recheck front.
5. Check left side (head turn) blind spot. Recheck to the front.
6. Signal intention to left when way is clear. Accelerate slightly to move around slower car.
7. Turn steering wheel as needed to move into the "new" lane.
8. Maintain adequate space cushion to the side of your vehicle. Accelerate as needed.
9. Steer to straighten your vehicle. Cancel signal. Recheck traffic behind you and to the front.
10. Adjust speed when positioned in "new" lane. Adjust space cushion around your vehicle. Look well down your lane.

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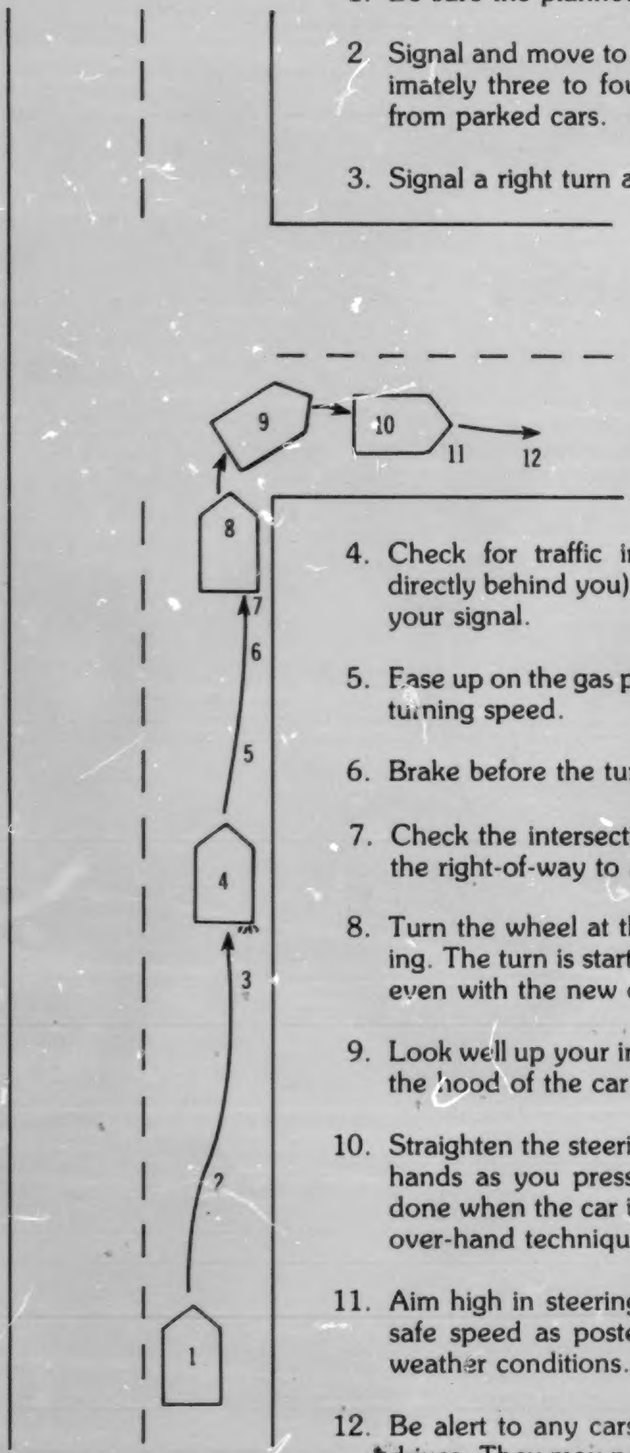
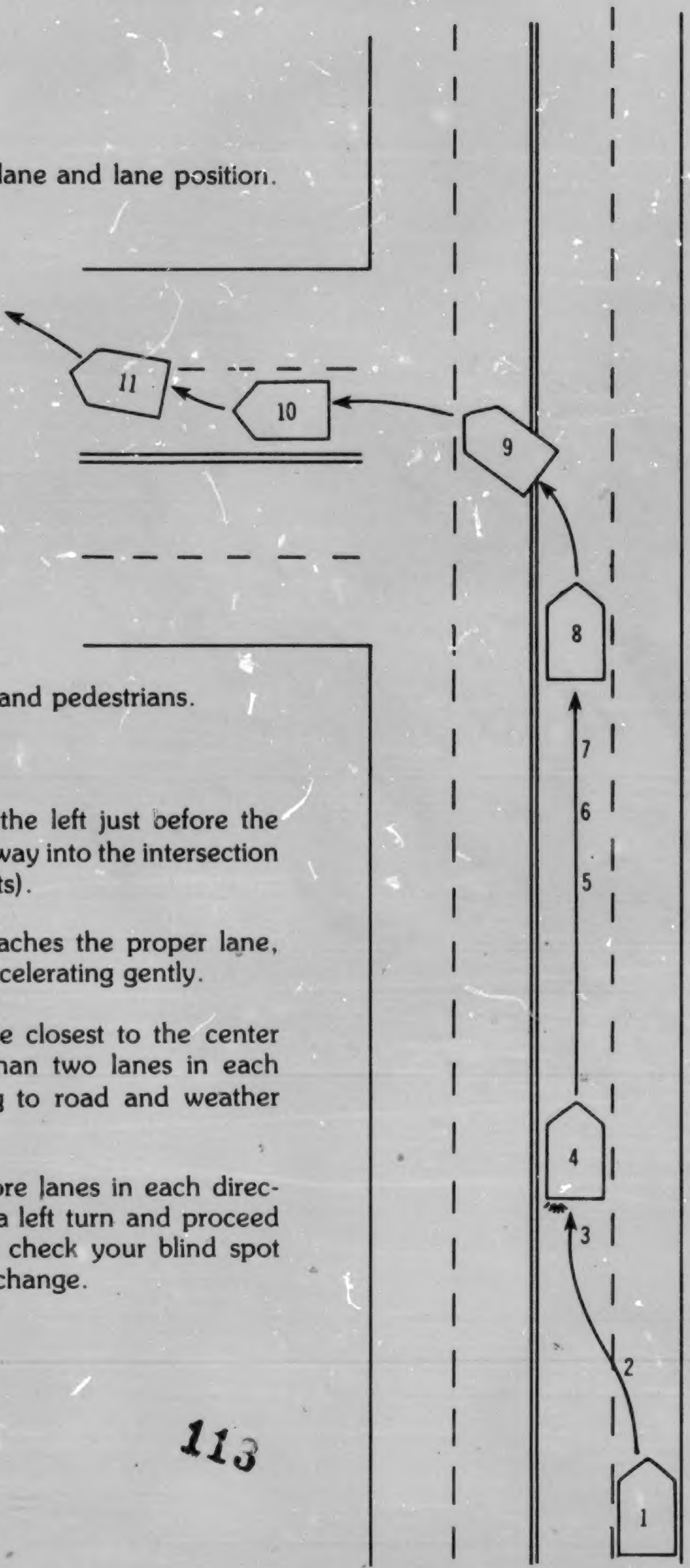
J. Turning Right



1. Be sure the planned turn is legal.
2. Signal and move to proper lane and lane position (approximately three to four feet from curb or two to three feet from parked cars.
3. Signal a right turn at least 100 feet before the turn.
4. Check for traffic in the inside mirror (especially traffic directly behind you) to make sure the other driver has seen your signal.
5. Ease up on the gas pedal; 6 to 8 mph is recommended safe turning speed.
6. Brake before the turn.
7. Check the intersection for vehicles and pedestrians. Yield the right-of-way to all pedestrians.
8. Turn the wheel at the corner using hand-over-hand steering. The turn is started when the front end of the vehicle is even with the new curbing or roadway.
9. Look well up your intended path. Do not look directly over the hood of the car.
10. Straighten the steering wheel by letting it slip through your hands as you press the accelerator pedal gently. This is done when the car is half-way through the turn. The hand-over-hand technique is best for recovery.
11. Aim high in steering once the turn is completed. Resume safe speed as posted or according to roadway, traffic or weather conditions.
12. Be alert to any cars pulling out or backing out of hidden drives. They may not have seen you making the right turn.

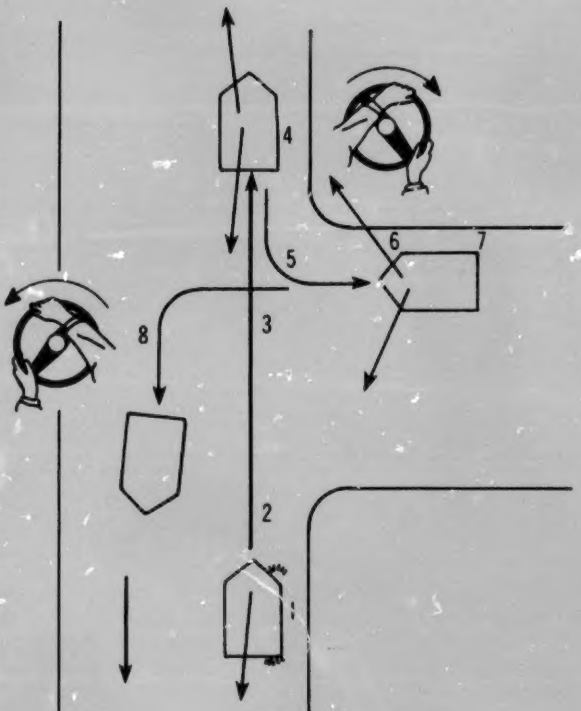
K. Turning Left

1. Be sure the planned turn is legal.
2. Signal and move up to the proper lane and lane position. Check blind spot before moving.
3. Check for traffic ahead, to the sides, and behind, using both the inside and outside mirrors.
4. Signal to turn left. Ohio and most other states require a turn signal to flash at least 100 feet before a turn in the city. In rural areas, signal 300 feet before the turn.
5. Adjust speed to about 10 mph before the turn and keep the wheels straight.
6. Check the intersection for vehicles and pedestrians.
7. Check the left mirror for vehicles.
8. Begin hand-over-hand steering to the left just before the front end of the vehicle reaches halfway into the intersection (at the crosswalk for one-way streets).
9. As the front end of the vehicle reaches the proper lane, unwind the steering wheel while accelerating gently.
10. Straighten the car in the lane (lane closest to the center line; double yellow line if more than two lanes in each direction) and accelerate according to road and weather conditions.
11. Return to the right lane (two or more lanes in each direction) if you are not going to make a left turn and proceed at the posted speed. Make sure to check your blind spot and signal before making the lane change.



L. Changing Directions by Backing In and Out of Sidestreets

1. Check in your inside rearview mirror for vehicles.
2. Signal to move to the right.
3. Steer to the right and stop when the car is about half a car length beyond the sidestreet or drive. The car should be within two feet of the curb.
4. Check to be sure there is no traffic behind. Shift to reverse.
5. Turn the steering wheel to the right. Look to the rear, primarily over your right shoulder.
6. Stop when you are off the street and completely in the sidestreet. The front wheel should be straight or slightly to the left. Shift to drive.
7. Signal to move left. Check for oncoming traffic.
8. Proceed in the proper lane. Assume safe speed.



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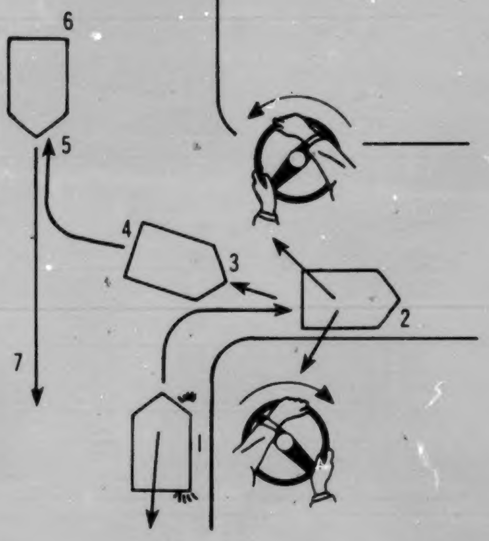
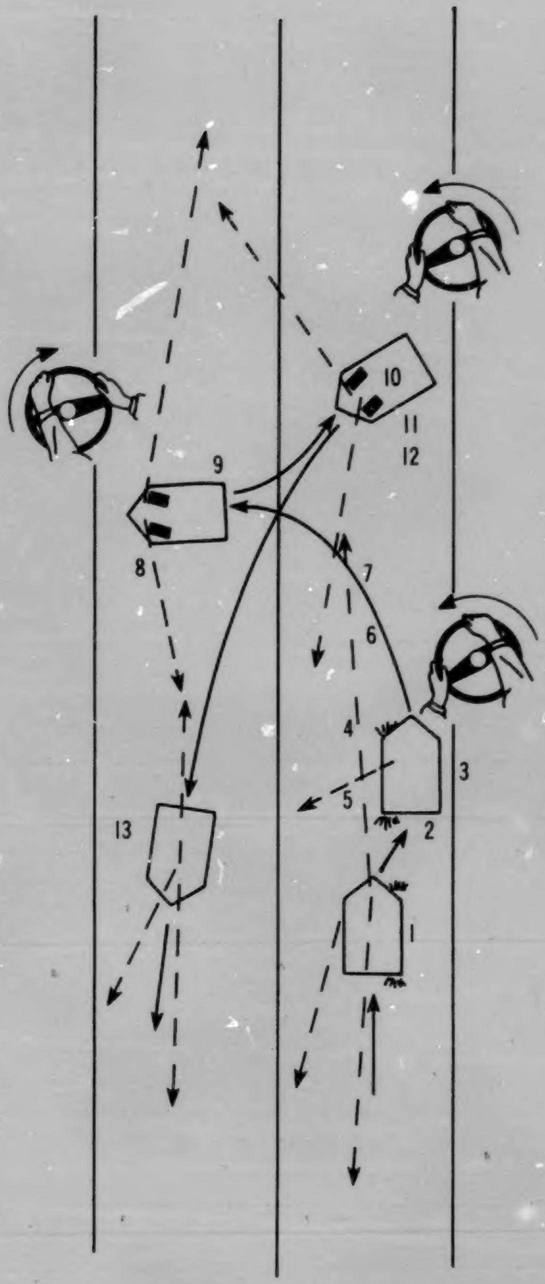
1. Signal to move right. Turn right into the middle of the alley or driveway. Stop when off the street.
2. Check approaching traffic. Shift to reverse gear.
3. Check for pedestrians on the sidewalk and for oncoming traffic in the street.
4. Back slowly, turning the steering wheel rapidly to the left. Look primarily over your left shoulder when backing. Be sure the right front of the car clears the alley or driveway.
5. Turn the steering wheel to the right to straighten the car.
6. Stop, then shift to drive.
7. Proceed in the proper lane. Assume safe speed.

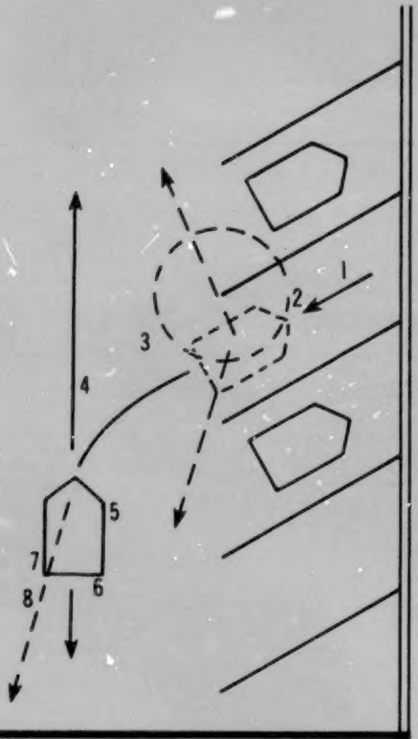


M. Y-Turn or Turnabout

1. Check traffic in the rearview and sideview mirrors. Make sure you have adequate room (500 feet front and rear) to complete this maneuver safely.
2. Signal to move right.
3. Steer right and stop close to the curb or road side.
4. Signal to move left.
5. Check for traffic, especially over your left shoulder.
6. Accelerate slowly.
7. Increase speed gently while making a hard turn to the left. Use hand-over-hand steering.
8. While rolling slowly near the opposite curb, turn the steering wheel quickly to the right and stop the car.
9. Shift to reverse gear. Back slowly.
10. Check for traffic through the rear window, primarily over your right shoulder.
11. Turn rapidly to the right.
12. Look over your left shoulder to see the curb. When the rear of the car is near the opposite curb, turn the wheel rapidly to the left. Stop.
13. Shift to drive gear. Check for traffic. Move forward into the proper lane and accelerate.

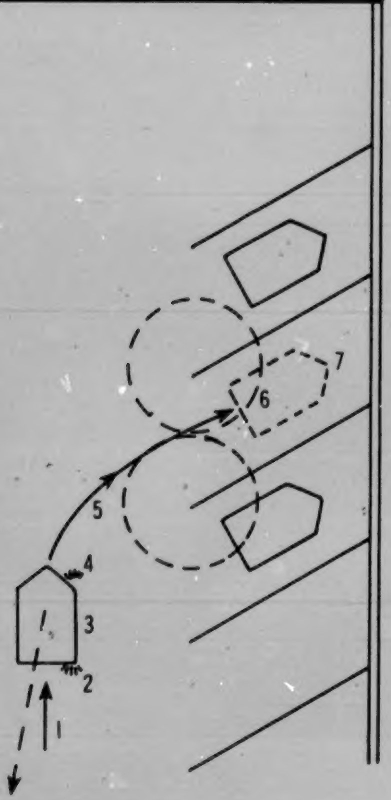


N. Entering and Leaving Angle Parking Space



Leaving

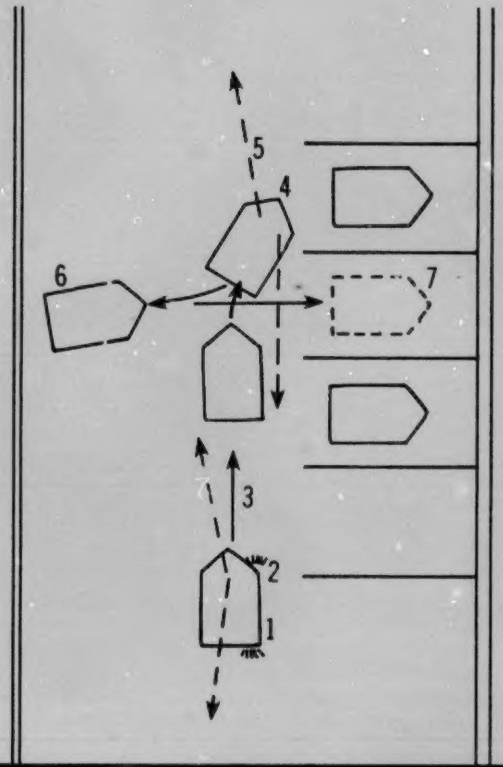
1. Start the engine. Be sure your front wheels are straight and check to see that no traffic is approaching you.
2. Shift to reverse gear.
3. Back slowly until you can see past the tops of vehicles parked to the sides. Recheck traffic.
4. When the front of your vehicle is near the rear of the vehicle to the left, turn the steering wheel to the right while continuing to back the car.
5. Check the right rear and left front for clearance.
6. Back into the proper lane. Straighten the car by turning the steering wheel to the left while backing.
7. Stop. Shift to drive gear.
8. Recheck traffic and proceed.



Entering

1. Check in your inside and outside mirrors for traffic as you approach the parking space.
2. Signal to move to the right.
3. Space your vehicle parallel to and five to six feet from the vehicle parked ahead of the parking space.
4. Begin to turn right when the front window post of your vehicle is in line with the left rear of the vehicle parked next to the space. Check the left front of your vehicle for adequate clearance.
5. Check over your right shoulder to see that the right rear of your vehicle clears the parked vehicle.
6. Turn the steering wheel slowly to the left to center your vehicle in the space. Continue forward slowly until your front wheel touches the curb.
7. Shift to park gear, make sure your front wheels are straight, set the park brake.

O. Perpendicular Parking—Different Entrances

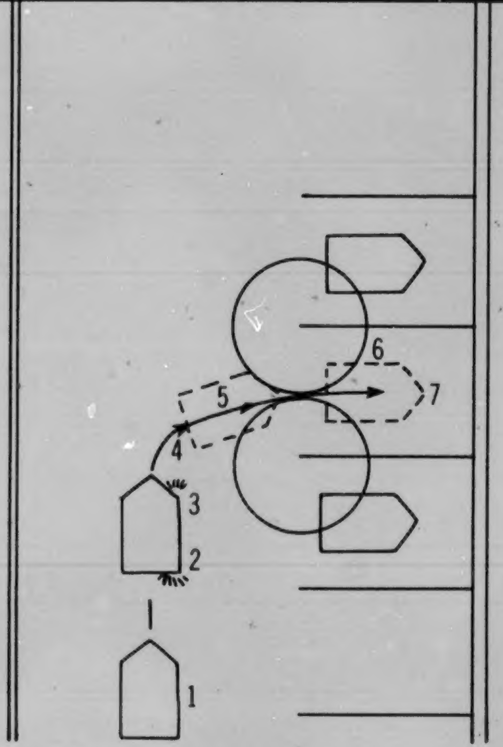


Entering: Tight Space

1-3 The same procedures as in angle parking.

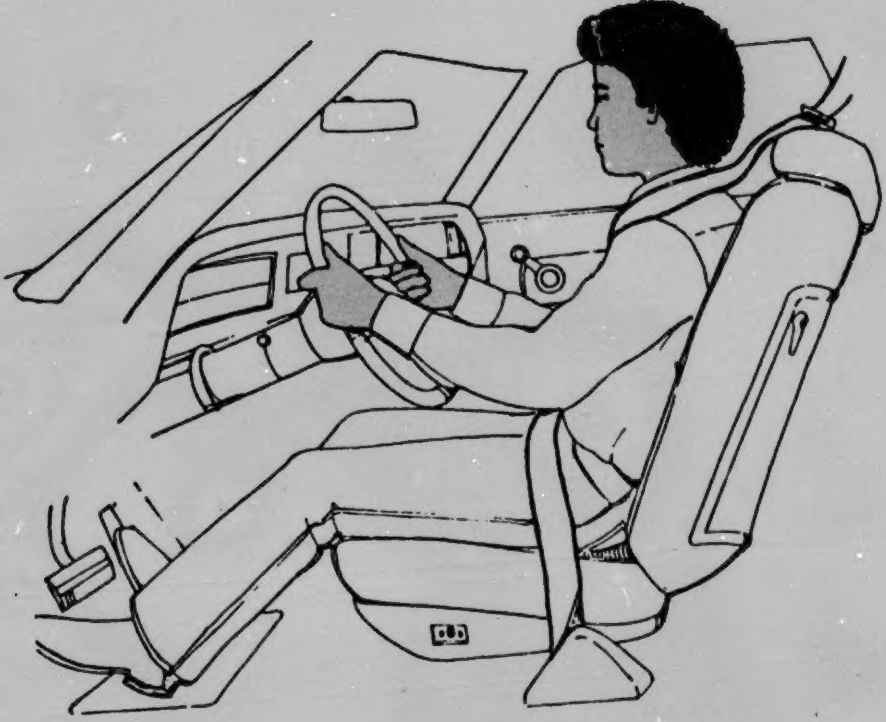
4. Pass the parking space. Turn your wheels right when the steering wheel is in the middle of the parking space.

5. Stop directly behind the vehicle to the left of the parking space. Check traffic in both directions using good head checks. Turn the wheels back to the left. Shift into reverse. Back slowly checking over your right shoulder. Stop when the vehicle is to the other side of the street or lane. Shift to drive. Steer to the right centering the vehicle in the parking space. Make sure the wheels are straight as you touch the curb. Shift into park.

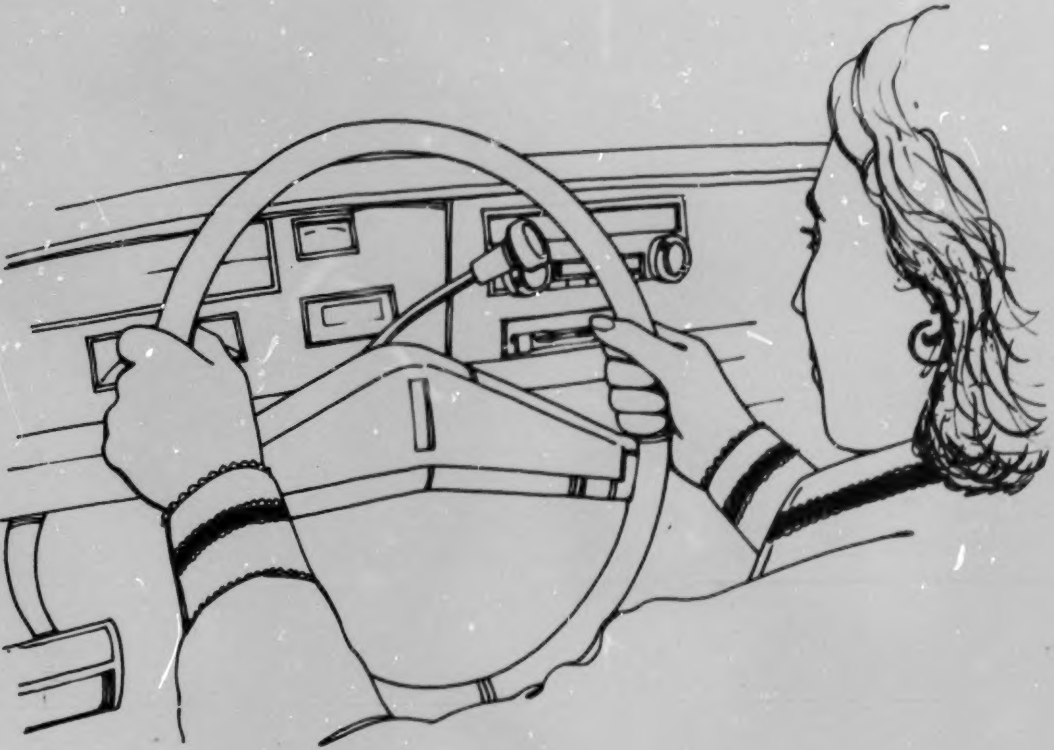


Entering: Adequate Space

1. Check for traffic in the inside and outside rearview mirrors.
2. Signal to move right.
3. Space your vehicle 10 to 12 feet (two car widths) from the rear of the parked vehicle.
4. When the front bumper of your vehicle passes the left taillight of the last parked vehicle, begin to turn right.
5. Continue to turn right, adjusting your steering to center the car in the parking space.
6. Check over your right shoulder to see that the right rear of your vehicle clears the parked vehicle.
7. Touch the curb gently. Make sure your front tires are straight. Shift to park.



Proper Driving Position



9-3 Hand Position

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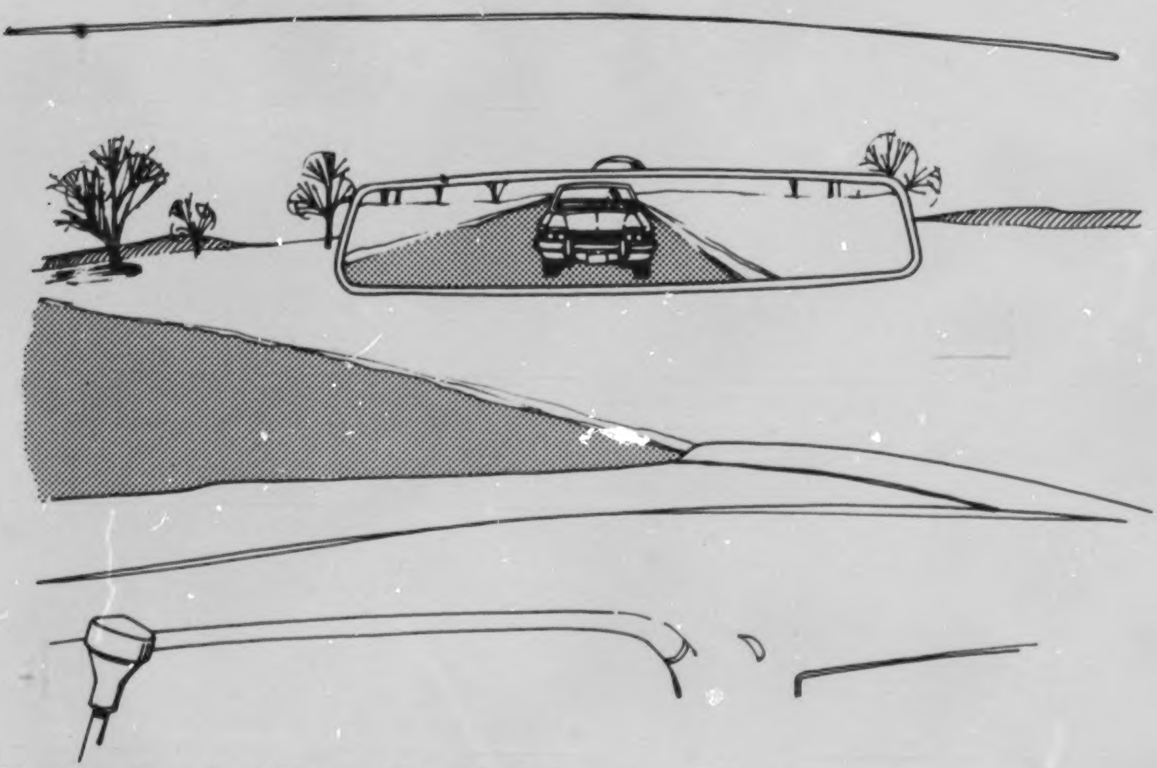
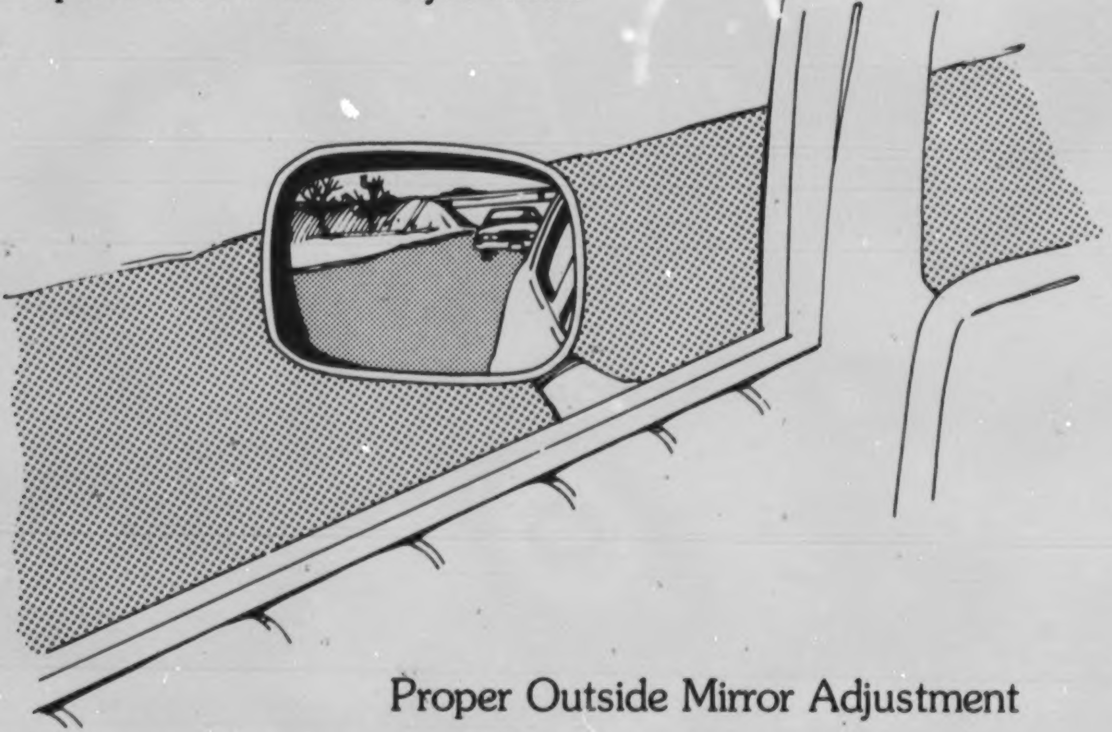
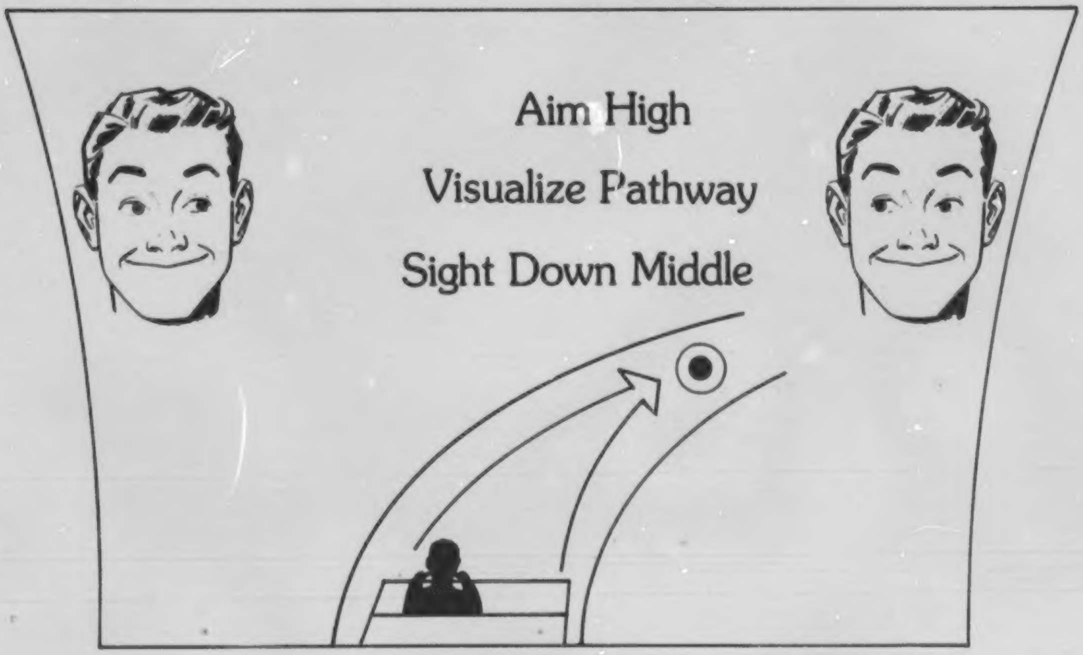


Proper Inside Mirror Adjustment



Proper Outside Mirror Adjustment

Intended Path of Travel



Aim High

Visualize Pathway

Sight Down Middle

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LESSON 6: INFORMATION SHEET

Understanding Your Brakes

Points to Remember:

1. Brakes stop the wheel but tires stop the car.
2. Braking distance varies significantly among different makes of car. Because of this, it is a mistake to assume that you can stop as quickly as the car ahead of you.
3. Power brakes do not stop the car more quickly than regular brakes but they require less foot pressure for operation.
4. If your engine dies and your car has power brakes, you still have several pumps of the brake left before the power assist is used up.
5. Pumping the brakes to "cool" them when you are going downhill is a poor technique. Downshift early and use moderate brake pressure when necessary to hold speed down.
6. When your brakes get wet, they will not hold. Disc brakes are less easily affected by water than are regular brakes.
7. If your front brakes get wet and your rear brakes remain dry, your car may skid when you brake on a wet road.

How They Work:

Brakes convert the energy of movement into heat energy. When brakes get too hot, they become slippery and will not hold.

Braking in Traffic:

1. Whenever you brake harder than necessary in traffic, you invite a rear end collision.
2. You can gain braking distance by allowing extra following distance ahead. This also makes it easier for trailing drivers to stop in time. Adding extra following distance is a good defensive measure since a car traveling at 20 mph can stop in one and one-fourth seconds and a car going 40 mph can stop in two seconds. It takes only three seconds for a car traveling 60 mph to stop.
3. You can usually brake to avoid trouble more often than you can accelerate to avoid trouble.
4. Flash your brake lights to warn trailing drivers of a stopping situation ahead.

LESSON 6: INFORMATION SHEET

Left-Foot vs. Right-Foot Braking

Braking with the left foot instead of the right is a controversial subject. Some experts consider it dangerous. But others, who use it regularly, find it has definite advantages.

Advantages of Left-Foot Braking

With the left foot always ready over the brake pedal, you can apply brakes much sooner. This is especially useful when driving through crowded streets. If a child darts out behind a parked car, the left foot can actually apply the brakes before the right foot can be lifted from the gas pedal. The time and distance saved might easily save a child's life.

Some drivers intentionally let their left foot rest lightly on the brake pedal when passing through crowded streets. Thus, even though the right foot is feeding a little gas, the left foot already has the car under control, ready to brake hard in a fraction of a second for any emergency, such as a running child.

This practice also makes split-second braking possible in any tight highway situation, as when squeezing past a construction area.

Disadvantages of Left-Foot Braking

Learning left-foot braking has some dangers. Until the left foot becomes "sensitized," beginners accidently jab the brake too hard, lock wheels, and cause sudden stops. This error may be made several times during the first few days of learning.

Using left-foot braking has some further problems. There is always a chance that in a moment of emergency the driver might not be able to decide which foot to use. Confusion can occur at night. The left foot cannot handle both the dimmer switch and the brake pedal at once. Wear on the brakes is extreme when the driver leaves his or her foot constantly on the brake.

It's habit-forming. If you learn left-foot braking and then switch to a standard-shift car, you may have to unlearn it.

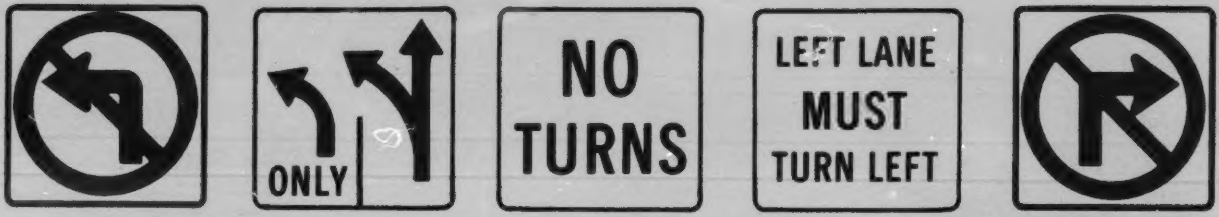
Reaction time is not improved. Remember that you see with your eyes and the brain interprets what to see. With this in mind, your reaction time is not much faster than right-foot braking. Even riding the brake does not make your braking distance any quicker or shorter.

Which method should you learn (teach) first? Learn (teach) the right-foot method. Left-foot braking is an improvement that can come later. Good drivers can learn both.

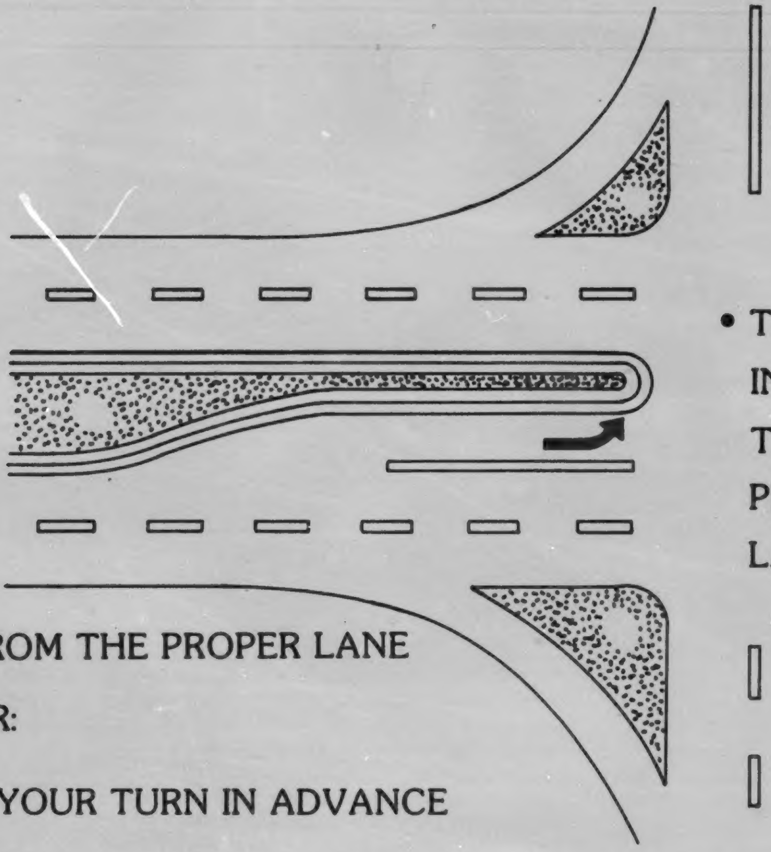
Turning Maneuvers

WHEN YOU PLAN TO TURN:

- Look for these Signs


ONLY
NO TURNS
LEFT LANE MUST TURN LEFT

CAN YOU THINK OF SOME OTHER TRAFFIC CONTROLS FOR TURNING?



- TURN INTO THE PROPER LANE

- TURN FROM THE PROPER LANE

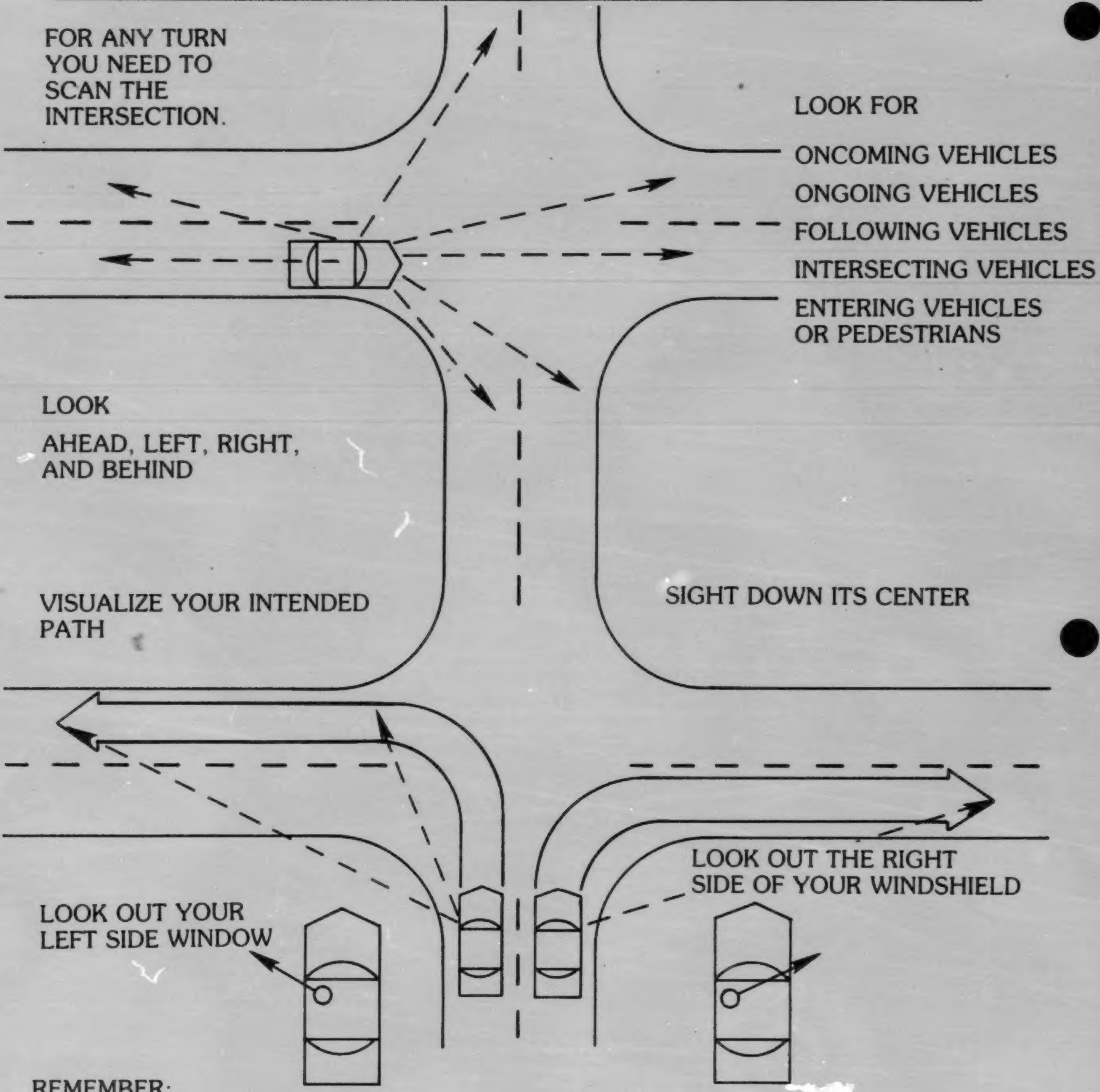
REMEMBER:

- SIGNAL YOUR TURN IN ADVANCE

100 ft. IN BUSINESS AND RESIDENTIAL AREAS
300 ft. IN RURAL AND CONTROLLED ACCESS AREAS

IT IS AGAINST THE LAW TO FLASH TURN SIGNALS AS A COURTESY OR DO-PASS SIGNAL TO OTHER DRIVERS TO THE REAR.

VISUAL HABITS FOR TURNING



FOR ANY TURN
YOU NEED TO
SCAN THE
INTERSECTION.

LOOK FOR

ONCOMING VEHICLES
ONGOING VEHICLES
FOLLOWING VEHICLES
INTERSECTING VEHICLES
ENTERING VEHICLES
OR PEDESTRIANS

LOOK

AHEAD, LEFT, RIGHT,
AND BEHIND

VISUALIZE YOUR INTENDED
PATH

SIGHT DOWN ITS CENTER

LOOK OUT YOUR
LEFT SIDE WINDOW

LOOK OUT THE RIGHT
SIDE OF YOUR WINDSHIELD

REMEMBER:

SCANNING IS THE ABILITY TO SURVEY THE TRAFFIC SCENE IN A VERY SHORT TIME.

BE SURE TO SEE WHAT IS IN YOUR FORWARD BLINDSPOT.

AS YOU TURN LOOK THROUGH YOUR TURN. AIM HIGH AHEAD TOWARD THE PATH YOU INTEND TO FOLLOW. DOING THIS WILL HELP YOU RECOVER.

LESSON 6: INFORMATION SHEET

Safe Backing Practices

1. Plan and drive your routes to avoid backing whenever possible.
2. Don't depend entirely upon your rear-vision mirror.
3. If necessary to back some distance, stop part way, then get out and check your safe progress.
4. Never back around an intersection corner in order to turn around, instead drive down the street to a side street or driveway and turn around there, or, if only a short block, drive around it.
5. If you have to use a driveway to back in or back out, where possible back into the driveway from the street, then you can drive out forward and see where you are going.
6. When backing across a sidewalk and into a street, stop at the sidewalk to make especially certain that there is no child playing behind or close by. Stop again at the curb to make a last check on traffic before backing into the street.
7. When backing out of a driveway always check for objects or small children that might be concealed from your view. Walk around your vehicle before entering.
8. In backing a larger vehicle, or one with a trailer, try to have someone guide you. Have the guide stand to one side and signal, not call. Never let your guide get back of your vehicle. Remember that in backing a trailer you will have to turn your wheels opposite from the direction in which you want the trailer to move.

LESSON 7: Driving Tactics and Strategies

Time: 2 1/2 Hours

Overview: Driving decisions and performance to a large extent depend on a clear, complete, and accurate picture of the immediate surroundings. Once drivers perceive the traffic situation at hand, they must then interpret and evaluate various actions and events for hazards. Some traffic situations are so complex that the meaningful information is often camouflaged to such an extent that only a trained observer can analyze it. Thus, safe driving requires a four-part thinking-doing process. It involves identifying information from the scene ahead, behind, and to the side of the car; predicting possible problems; deciding on a plan of action; and executing the right maneuver.

LESSON OBJECTIVE: The candidate will identify specific hazards and associated risks for given traffic situations and discuss the appropriate action to handle each situation safely.

Instructional Concepts

1. Since we receive most of the information we need through our eyes, driving performance depends on how well we use our eyes. Remember the eyes look, the brain sees.

2. Selective searching is a way of making information gathering as efficient as possible. One's attention is directed to those things that have collision potential and away from anything not essential to collision-free driving.

3. A major source of driver error is incorrect perception of traffic events. In part, this problem arises from the fact that the driver assumes others will behave in an expected manner.

4. Before decisions can be made, information must be gathered, analyzed, and evaluated.

5. Ways to minimize the risk or collision include positioning, speed adjustment, communicating intentions to others, acting in a predictable manner, and having a way out or alternative pathway available.

6. Speed and position should be adjusted so that a driver can reduce the risk of a single hazard, separate hazardous elements so that it is possible to deal with them one at a time, or compromise when two or more hazards must be dealt with simultaneously.

7. A slight adjustment of speed and position is preferable to a major adjustment of either one since abrupt or extreme maneuvers can surprise other highway users and may cause them to lose vehicle control.

Suggested Content Outline

7.1 Think-doing process:

The identification of traffic clues is important because these clues provide us with much of the evidence for evaluating problem situations and arriving at decisions.

The letters IPDE convey the four parts of the process. They are:

- I-dentification
- P-redicting
- D-eciding
- E-xecuting

7.2 Strategies for identifying traffic situations:

A. To identify something, it must be perceived.

Instructional Resources

A Resource Curriculum in Driver and Traffic Safety Education, pp. 39-44.

Fact Sheet:

Good Vision Protects You (pp. 130-131)

Pamphlets:

Driving Takes Seeing (American Optometric Association)

I Didn't See (American Optometric Association)

Slides:

Various Traffic Situations

Learning Activities

7.1 Show slides of various traffic situations. Ask the candidates to identify the important clues (elements) present.

Candidate Resources

Suggested Reading:

Drive Right, pp. 70-86, 254-259.

Let's Drive Right, pp. 78-93, 270-278.

Pamphlets:

Driving Takes Seeing

I Didn't See

Suggested Content Outline

B. Perception is a process which involves our mind and our senses.

C. Perception also involves gathering information about the driving environment around us and processing it into something meaningful.

D. Perception is a selective process and it takes time.

E. Since time to make decisions is limited in a moving vehicle, effective search methods to select the important elements and clues are necessary.

F. Drivers who do not utilize proper seeing habits will fail to identify what is going on around them.

7.3 Habits for effective identification:

A. The utilization of the 12-second sight distance technique helps the driver identify traffic elements well in advance. The faster the vehicle is traveling, the farther away the sight distance should be.

Instructional Resources

Transparency:

Perception (T-22)

Sportsmanlike Driving
pp. 92-100.

Information Sheet:

Development of Efficient Visual Perception (pp. 132-134

Learning Activities

7.3 Ask the question: How do you establish a visual reference point?

Have the candidates explain what is meant by centering on the travel path.

Candidate Resources

Suggested Reading:

Sportsmanlike Driving, pp. 92-100.

Information Sheet:

Development of Efficient Visual Perception

Suggested Content Outline

B. Choosing a constant target 12 seconds ahead of the vehicle helps you hold the vehicle in a straight path without weaving. This is most helpful when traveling on narrow roads.

C. Another name for this technique is called "High-Aim Steering."

D. The driver must also keep his or her eyes scanning and searching.

   1. The driver needs to move from the target 12 seconds ahead to the left and to the right. This is commonly called "Keeping your eyes moving."
   2. The driver who fails to keep his or her eyes moving often drives with a blank or fixed stare.
   3. This type of vision is referred to as central vision (a small 3° range of vision).

Instructional Resources

Filmstrip:

Smith System: *Good Seeing Habits* (Ford)

Aids:

Field of Vision Psychophysical Testing Device

Learning Activities

7.3 Ask the candidates to describe the difference between a fixed and a blank stare. Have them list several examples of conditions which may cause each. Discuss, too, how each may be avoided.

Test candidates on their peripheral vision by utilizing the necessary psychophysical testing device.

Ask the candidates to discuss the point: The greater the speed of a vehicle the more the driver relies on central vision.

Candidate Resources

Suggested Content Outline

Instructional Resources

4. Drivers must learn to use fringe or peripheral vision to help detect all that is around them (180°). How well the driver checks various areas will depend on the search pattern used. Another name for this habit is called "Getting the big picture."

7.4 Classify elements into four major groups:

A. The identification of traffic events is crucial because it requires alertness and the ability to select those events that are important.

B. It is usually more efficient to deal with several things in a systematic way.

C. Grouping aids in the selection process; it also helps insure that some significant event or element is not overlooked. Four classifications include:

Learning Activities

Candidate Resources

7.4 Have the candidates identify four classifications in the traffic environment that help the driver identify critical elements.

Suggested Content Outline

1. Highway and street characteristics
   - design features
   - highway hazards
   - areas of reduced space
   - areas of reduced visibility
   - areas of intersecting traffic
   - areas of reduced traction
2. Other highway users (traffic)
   - motor vehicle characteristics
   - pedestrian characteristics
   - clues related to probable driver and pedestrian behavior
3. Traffic controls
   - kind or type of control
   - clues to changes in controls
   - clues to type of street or intersection

Instructional Resources

Aids:

Flash cards with digits

Slides of Traffic Situations

Learning Activities

7.4 Use a series of exercises designed to develop the candidates ability to search and scan for potential hazards. Use 8 1/2 by 11 inch cardboard sheets with numbers and letters written in the middle. Starting with three digit numbers and letters, flash each card for no longer than 1/2 second. Follow this drill by using slides of various traffic situations. Ask specific questions to make the candidates search and scan for hazards.

Candidate Resources

Suggested Content Outline

4. Your own vehicle
    - vehicle operating status
    - vehicle controls feedback
    - driver condition

7.5 Strategies for predicting hazards:

A. Good seeing habits are essential for predicting possible driving hazards. Once the driver has identified a possible hazard, the driver must attempt to predict the action that might result.

Instructional Resources

Learning Activities

7.5 Ask the candidates to explain the difference between an immediate and a potential hazard.

Ask the questions:

- Why is it important for a driver to always 'leave an out'?
- How does a driver build this out?

Candidate Resources

Suggested Reading:

Drive Right, pp. 75-84.

Let's Drive Right, pp. 94-102.

Suggested Content Outline	Instructional Resources
B. Point out that there are factors that can help a driver make accurate predictions. These factors include: 1. Traffic laws and controls 2. Natural laws and forces 3. Vehicle dynamics (capabilities and limitations) 4. Roadway conditions 5. Traffic conditions 6. Human factors (attitudes and behaviors)	
C. Stress that the experienced driver is better able to predict based on previous learning or experience. In other words, he or she builds up a store of useful information.	Worksheet: Judgment Situations (pp. 135-136)
D. Emphasize that experienced drivers always anticipate the worst when their path ahead is uncertain or blocked. As a result, they are seldom caught by surprise.	

Learning Activities	Candidate Resources
7.5 Have the candidates complete the worksheet. Once completed, have the entire group discuss their answers. Make sure that each candidate understands why the answers selected are the best choices. (Answers: (1) A; (2) A; (3) D; (4) C; (5) A)	Worksheet: Driving Tactics and Strategies: Judgment Situations

Suggested Content Outline

7.6 Strategies for making decisions:

A. Drivers must always be ready to choose the correct response to any hazard (element) that may arise.

B. The best approach to making appropriate decisions includes the following strategies:

1. Minimizing—Two ways to increase the amount of time to make a decision include: reducing the vehicle's speed and maintaining as much distance as possible between your vehicle and all hazards (elements) having collision potential. Maintaining an adequate distance from potential hazards is referred to as establishing a space cushion.
    - Point out that the expert driver uses both position and speed changes to buy more decision time.
    - Slight adjustments of speed and positioning are better than any major adjustments of one or the other.

Instructional Resources

Suggested Films:

Space Driving Tactics (ODHS)

A System for the Road (OTSEC)

Filmstrip:

Protecting Your Margin of Safety (Ford)

Information Sheet:

A Technique to Position Yourself in Traffic (p. 137-138)

Learning Activities

7.6 Ask the questions:

- How can a driver minimize risks through adjustments of vehicle speed and position?
- How do you determine a safe following distance?
- Do time-and-space estimates apply only to the space ahead (in front) of the vehicle?

Candidate Resources

Suggested Reading:

Sportsmanlike Driving, pp. 108-119.

Information Sheet:

A Technique to Position Yourself in Traffic

Suggested Content Outline

- The establishment of the two-second following distance rule is very important to maintaining adequate time and space.

2. Indirect minimizing—By communicating your intentions, other highway users know what you plan to do. Some examples of communicating intentions include:
    - headlights
    - brake lights
    - horn
    - directional signals and emergency flashers
    - vehicle placement within the traffic formations
3. Separating—Through early adjustment of speed and positioning, when faced with two hazards with high-risk potential, the driver can deal with each of the hazards separately without serious problems.

Instructional Resources

Filmstrip:

Compromise and Separate (Aetna)

Learning Activities

Candidate Resources

Suggested Content Outline

4. Compromise—When there is no way to either minimize or separate, the best strategy is to maintain maximum distance (especially to the front) between vehicles and to always leave yourself an escape route (out).

7.7 Strategies for executing decisions:

A. Execution is the most crucial step in the IPDE process. Control of the vehicle requires knowledge, practice and skill.

B. Executing a decision depends on three important factors. These are:

1. vehicle speed
2. space to maneuver
3. traction

C. To execute properly, the driver must time the placement of the vehicle properly in relation to other vehicles and pedestrians using the steering controls, brakes, accelerator, and signaling device.

Instructional Resources

Slides:

Local Traffic Situations

Learning Activities

7.7 Ask the question: What does executing a driving decision mean?

Ask the candidates to identify those factors that must be considered when making or executing a decision.

Using local traffic situations, have the candidates identify important elements (hazards), predict what might happen, and discuss what actions are necessary. Have them respond by using the following actions: (1) adjusting speed, (2) adjusting direction, (3) signaling, (4) braking, and (5) looking for an out.

Candidate Resources

PERCEPTION

RECEIVING AND

IDENTIFYING STIMULI

THROUGH THE VARIOUS

SENSES AND GIVING MEANING

TO THE STIMULI.

LESSON 7: FACT SHEET

Good Vision Protects You

In any kind of traffic—on rural highways, busy urban streets and high volume freeways and expressways—good vision is essential to good driver performance. Authorities have estimated that 90 percent of driving decisions appear to be based on what is seen. Good vision, therefore, is critical to safety on our streets and highways.

What Is Good Vision?

Good vision is made of several elements.

1. Acuity—The ability to focus and see clearly with each eye separately and with both eyes together—probably the most important visual element for driving. It is essential for perceiving hazards, reading road signs in time, and for general adaptation to driving conditions.

2. Distance judgment—The ability to judge distances between yourself and other objects. This is essential for passing other cars in the face of oncoming traffic and for maneuvering from one lane to another among moving vehicles on streets and highways.

3. Field of vision—The ability to see over a large area without moving either your eyes or your head, sometimes called "looking out of the corners of your eyes." This is needed to detect crossroad traffic, pedestrians at the roadside or intersections, and to get the general driving picture.

4. Muscle balance—The ability to point your eyes simultaneously with ease at a given object. This is essential for good two-eyed vision, acuity, distance judgment, and field of vision.

5. Night vision—The ability to see in the area of low illumination beyond your own headlights, and the ability to recover quickly from glare. Night vision generally deteriorates rapidly after age 40.

Some Driving Tips

To be a safe driver you must develop good viewing habits and compensate for visual defects. You must also remember that it takes time to perceive, and time to respond. Even with good vision, you can normally perceive an unexpected obstacle only one-half as far away as you can an expected one.

Help Your Eyes

- Have your vision examined periodically, with special reference to driving.
- Drive within your vision limitations; be sure you know your limitations. Wear glasses if they have been prescribed.
- Cut down on night driving if you are troubled by glare or poor night vision. If you must drive at night, drive at an appropriate speed.
- Compensate for poor field of vision by moving your eyes from one side to the other.
- Use extra care in passing other cars if your distance judgment is impaired.
- Remove unnecessary stickers, objects, and decorations from your windshield and dashboard that might obscure your field of vision.
- Have your headlights checked periodically so they provide maximum light with each beam in the proper position. (Make sure your windshield is always clean—both outside and inside.)

LESSON 7: INFORMATION SHEET

Development of Effective Visual Perception

We know that competent drivers do not just guide machines; they are involved in a complex and constant process of observing, evaluating, and deciding how best to control the speed and position of the car in order to achieve the safe and efficient movement of the car. The expert drivers depend primarily upon the development of accurate judgments and correct decisions for determining their mechanical control of the car. These judgments and decisions are, in turn, based primarily on the driver's perception or reading of the traffic scene.

Perceiving is a process which involves the mind and the senses: the brain must select and interpret the sensory data before it becomes meaningful or useable. The art of perceiving something may be described in the following way. First, you give attention to some object, event, or circumstance outside your own mind. Then, your senses send impressions to the brain where they are registered, and for all practical purposes may be thought of as a picture. With continued perception, the pictures are interpreted and become meaningful to us.

For visual perception to take place the eyes must be focused momentarily on the object to be perceived. The eyes operate like a camera, flashing 30 to 40 pictures to the brain each second. We focus and refocus our eyes, then they snap the picture and send images to the brain. The brain does the processing work of developing the negative, printing the picture, and storing the result. When used efficiently, our eyes are capable of extremely rapid movement and of instantaneous shifts in focus from a book to a distant object.

We can focus our attention on only one thing at a given moment, but the eyes can oscillate or shift very rapidly from one item to another. Therefore, reading or observing events is accomplished by continuous but alternate movements and pauses. During the pauses or fixations, the eyes focus on a portion of the event. The the eyes move slightly to another point of fixation and flash another image to the brain. Since no images are recorded during the movement of the eyes, reading or observing can be described as a series of fixations.

When we are focusing our attention on an object to obtain a sharp and clear visual image, we use what is called central vision. This is a narrow, three degree cone of clear vision which makes possible our identification of things. With central vision we determine color, smoothness, roughness, sharpness, and other characteristics of the objects observed.

Fringe or peripheral vision is also necessary for efficient reading of the traffic picture. This vision consists of the upper, lower, and side parts of our eyesight. We use our fringe vision to detect those items about us which should direct our central vision to identification and interpretation. It warns us of approaching danger from the sides and keeps us informed of movement about us without the necessity of directing our main attention at each specific object. Fringe vision also keeps us informed of our correct spacial relationships and is necessary for estimating the speeds of other vehicles.

Although it is necessary to fixate on an object momentarily to identify it, keeping central vision focused on an object can be very dangerous. This is because fringe vision disappears almost entirely when you look at an object in sharp detail or when your vision is strained.

When you allow your eyes to hold on something that attracts your attention, a dangerous fixed stare can result. A fixed stare begins when something holds your attention beyond two seconds. If you allow your mind to become preoccupied or inattentive to your surroundings, a blank stare will result. This is extremely dangerous for the driver since the mind is no longer interpreting the images sent to it by the eyes. Expert drivers rarely permit themselves to stare because they habitually dispose of the eye-holding temptations promptly.

Actually, the purely mechanical aspects of perceiving can be done quite rapidly. However, visual perceptions do take time. The selection and organization of incoming data into meaningful relationships is bound to be time consuming. If you are set to perceive or know what to look for, perception can take place in a minimum amount of time. We also perceive quickest that which is meaningful and is based on previous learning or experience.

Following are some general principles upon which to guide the improvement of your visual perception:

1. The mind can interpret and analyze only those events which we give out attention to and concentrate on.
2. The larger the number of unrelated observations that a driver gives his or her attention to, the greater the limitation on observations that are related to driving.
3. Since we can't perceive all that is observed, perception must be a selective process.
4. When there are a number of continuous events occurring simultaneously, the driver's attention is usually divided among them in proportion to their relative importance.
5. Efficient visual observation requires the observation and interpretation of a larger area of the traffic scene at each fixation.

6. The best observers will spend a shorter time on each fixation.

7. Constant scanning of the traffic scene helps prevent both the fixed and blank stare. This habit also prevents fatigue and resists distracting influences.

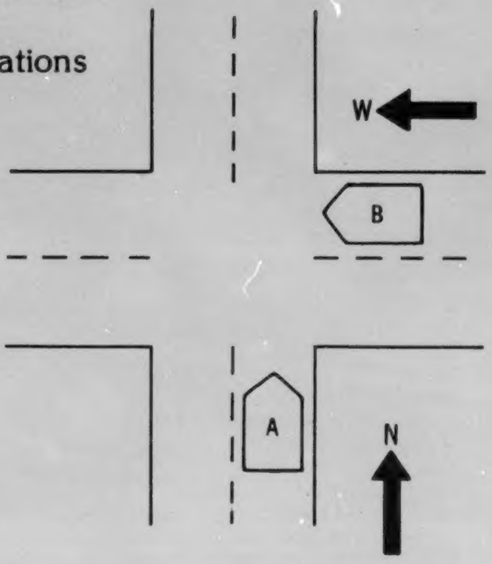
8. The driver's observations are limited by the physical abilities of his or her eyes. Our sensory equipment must be functioning properly and used efficiently in order to collect information speedily and accurately.

LESSON 7: WORKSHEET

Judgment Situations

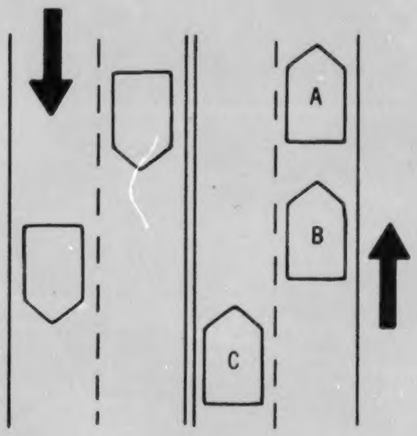
Situation 1: You are in Car A driving North approaching an intersection that is not controlled by a traffic light. Car B, driving West, is also approaching the intersection on your right. You are not sure whether your car or the other car should go first. What should you do?

A. Slow down and prepare to stop to allow the other driver to go through the intersection first.
B. Assume you have the right of way and continue through the intersection without reducing speed.
C. Slow down and tap your horn to warn the other driver that you intend to cross the intersection first.
D. Accelerate slightly; the other driver will probably slow down and you can easily precede him across the intersection.



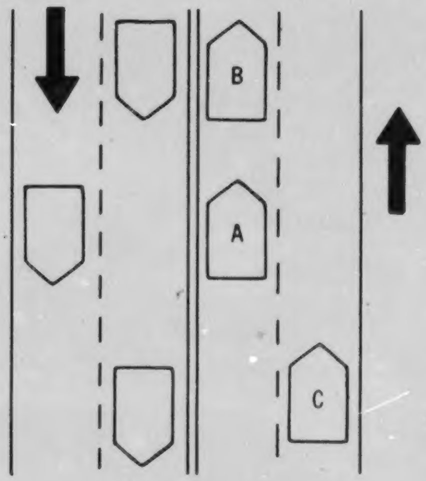
Situation 2: You are in Car C overtaking Cars A and B. Car B starts to signal an intent to pass Car A. What should you do?

A. Sound your horn to warn Car B that you intend to pass first.
B. Accelerate rapidly so that you can pass Car B before he or she moves out to the left.
C. Move to the right so that the left lane is open for Car B to pass.
D. Decelerate slightly so that Car B can



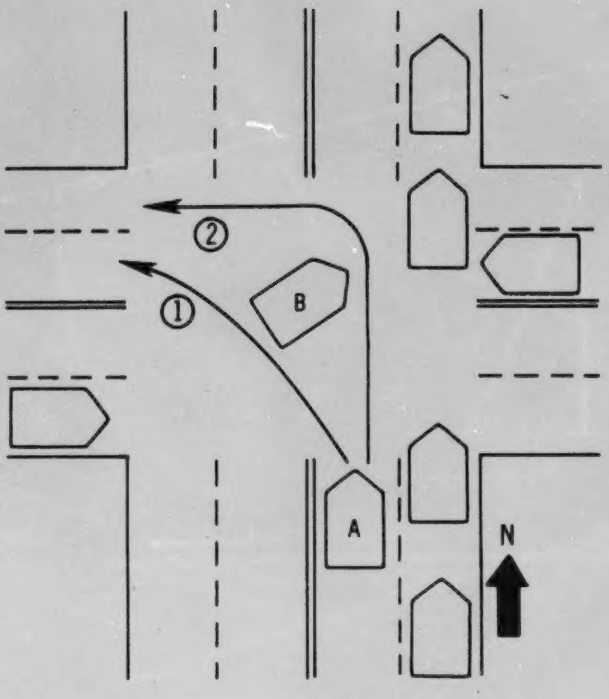
Situation 3: You are in Car A, traveling at about 45 mph, the legal limit on this road. It is evening; you are in a hurry. You have just passed Car C. Car B is moving at about 35 mph. What should you do?

A. Blink your lights at Car B to warn Car B to move to the right lane.
B. Accelerate slightly, move to the right, and pass Car B.
C. Get close to Car B's tail to get Car B to move over to the right.
D. Keep well behind Car B until Car B moves over to the right.



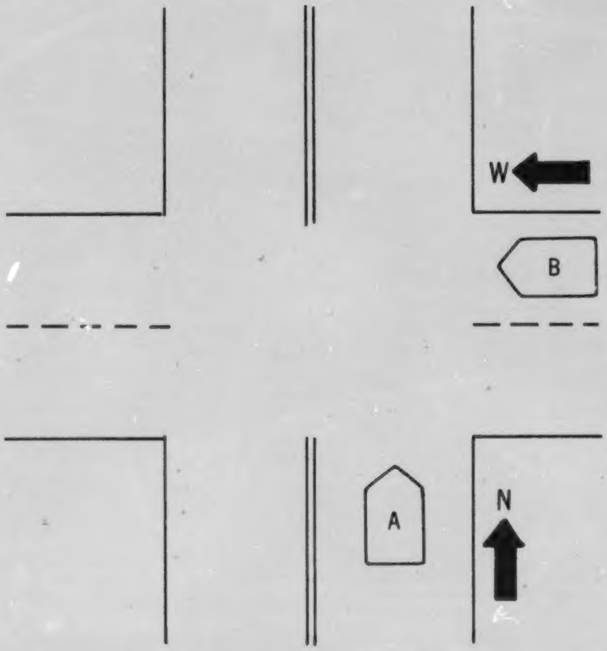
Situation 4: You are in Car A approaching an intersection where you want to turn left. The light is green. Car B is stopped, signaling for a left turn. Southbound traffic is light; northbound moderate. What should you do?

A. Stop before entering the intersection. Allow Car B to complete the turn, then make yours when possible.
B. Slow down and, following path (1), make your left turn.
C. Slow down, move to the right and make your left turn following path (2).
D. Cancel your plans for a left turn and go straight ahead instead. A left turn in this situation cannot be made safely.



Situation 5: You are in Car A, slowly approaching an intersection; you plan to go straight ahead. Car B is also approaching this intersection, climbing a hill. There are no traffic lights or stop signs at the intersection. It is snowing and traffic is very light. The north-south street is level. What should you do?

A. Stop so that Car B can cross the intersection in front of you without having to stop.
B. Accelerate enough to cross well in front of Car B.
C. Slow down slightly, tap your horn and keep going.
D. Move a little to the left and maintain speed.



LESSON 7: INFORMATION SHEET

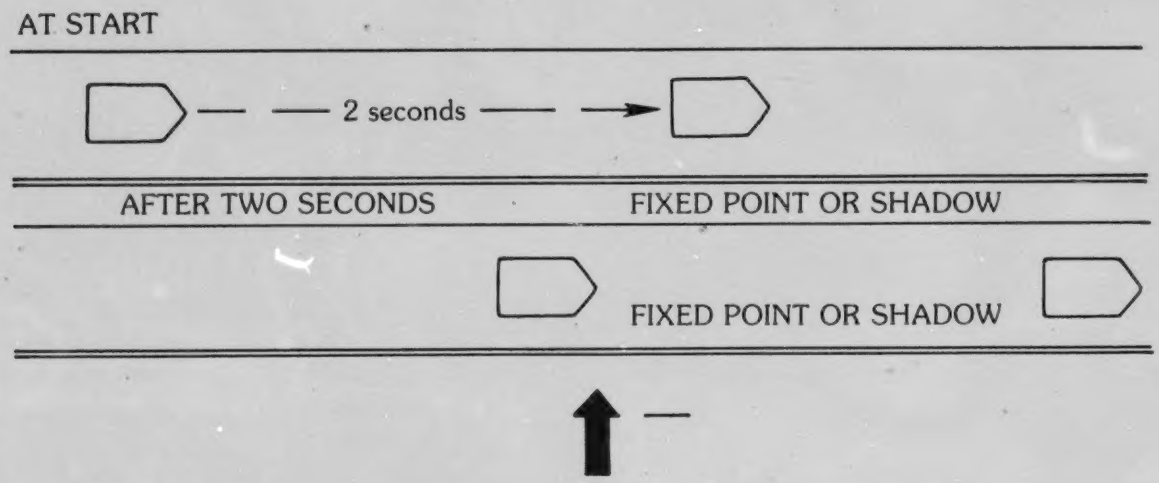
A Technique to Position Yourself in Traffic

Next time you travel by car, see how many times you spot motorists who are trapped in traffic. Most of the time it's poor driving that gets the trapped driver into trouble. If the driver had applied the technique of "Two, Twelve, Adjust," most trap situations could be avoided.

The two of "Two, Twelve, Adjust" is a method used to gauge following distance. Most of the time the trapped driver is tailgating the car in front. By tailgating the driver is driving blind; blind because the car ahead, or worse yet a truck, severely limits vision down the road. If you drive by responding primarily to the driver directly ahead, rather than observing conditions several cars ahead, you're in trouble.

By tailgating you create trouble in three ways: (1) reducing your vision in front—thereby cutting your advance warning of trouble, (2) reducing your time to react, (3) reducing your distance to brake or turn. Note: No mention is made of distance for every 10 mph of speed. The question is, just how do you judge a car length at any given speed? A simple solution is to forget about counting car lengths and start counting seconds of elapsed time. After all it's the time you have to see, react, and execute your driving maneuver that you're concerned with anyway.

To understand the timed technique of following a car, think of your car as following another vehicle down the road. As the vehicle ahead passes a fixed road mark, or better yet a shadow, start counting A-thousand-one, A-thousand-two. By the time you complete your two second count the fixed point or shadow should just be passing by the front of your car.



This two second rule for following distance automatically adjusts to any speed. If conditons are severe (fog, rain, poor road conditions), add an extra second or two to the regular two second rule for following distance. By making this two second rule for following distance a part of your driving, you're assuring yourself of time and space to: (1) see, (2) react, and (3) execute your driving maneuver.

LESSON 8: Driving Environment

Time: 7 1/2 Hours

Overview: To manipulate a vehicle in situations requiring precise movements, vehicle operators need to coordinate the use of vehicle controls with properly timed actions based on sound judgments and decisions. Techniques and underlying concepts for developing smoothness and precision in these maneuvers are an important part of driving in traffic. Prerequisite skills necessary for efficient and effective learning of such skills include:

- Basic Vehicle Control Tasks
- Driving Tactics and Strategies

In the previous lesson the candidate acquired a mental picture of the functions (identify, predict, decide, execute) as they relate to the driving task. This background is important because the functions will serve as fundamental connecting points in making accurate decisions regardless of whether the operator is negotiating a curve, passing another vehicle, or entering the expressway. The unit will utilize classroom, various media formats, and hands-on activities in the driver education vehicle.

- Classroom: 1 1/2 Hours
- Simulation and Multimedia: 2 Hours
- Behind-the-Wheel: 4 Hours

All instruction should follow the recommended sequence. (Note: For every three candidates, one instructor will be needed for each driver education vehicle when instructing in the behind-the-wheel phase.)

LESSON OBJECTIVE: The candidate will describe and demonstrate those skilled and properly timed actions necessary for basic driving maneuvers.

Instructional Concepts:

1. When discussing vehicle positioning, emphasize the importance of the driver's ability to see and to be seen. Drivers must learn to consider both immediate and alternative paths of travel when they select a position in traffic.
2. Frequent scanning to points ahead (12 second visual lead and 2 second following distance rules), to the sides, and to the rear are essential for gathering all the information drivers need to plan a path of travel.
3. At intersections, judging time and space gaps (intervals) is difficult because other vehicles are moving at varying angles from both the left and the right.

4. Communicating your intentions, as a driver, by various signals and signaling devices is crucial to safe driving.

5. Passing on a two-lane roadway requires very accurate time and space judgments. These can be built up through simulated passing maneuvers practiced when riding with other drivers.

6. Failure to build up adequate speed on an expressway acceleration lane reduces a driver's ability to merge safely.

7. Slight adjustment of speed and position is preferable to a major adjustment of either one on expressways since abrupt or extreme maneuvers can surprise other highway users and may cause a loss of visibility and vehicle control.

Suggested Content Outline

Classroom

8.1 Orientation to On-Street Driving:

- A. Stress that driving safely along an established path is not always easy. Point out that there are many hazards and conditions that affect a driver's path of travel.
- B. Reemphasize that if hazards are to be avoided, the driver must make decisions in time to take the appropriate action.

8.2 Entering into Traffic:

- A. Always check conditions thoroughly before entering the roadway. The driver should always ask the following questions:
  1. Is my path clear to enter?
  2. Will my path remain clear long enough for me to enter traffic safely?
- B. When entering, always stay within a single lane of traffic.

Instructional Resources

In-Car Instruction: Methods and Content, pp. 135-160, 211-213.

A Resource Curriculum in Driver and Traffic Safety Education, pp. 55-57.

Transparency:

HTS Hazards and Conditions That Affect a Driver's Path of Travel (T-23)

Transparency:

Entering Traffic Maneuver (T-24)

Learning Activities

8.1 Ask the candidates to name hazards and conditions that affect a driver's path of travel. Write their suggestions on the board.

8.2 Ask the question: Why is it important to blend immediately with traffic around you when entering the stream of traffic?

Candidate Resources

Suggested Reading:

Drive Right, pp. 80-83, 107-121.

Learning to Drive, pp. 81-91, 92-109.

Suggested Content Outline

8.3 Visual Strategies of 2-12-Adjust:

A. Always maintain a space margin (cushion) around the vehicle.

1. A space margin is the amount of hazard-free space that a driver has around the vehicle at any time.
2. A space margin must be enough to allow you the distance, time and visibility for safe movement at any given time.
3. The size and shape of the space margin will vary with the speed and your planned actions. It will also vary with the weather, highway and traffic conditions.

B. Rules for following distance include:

1. Allow at least two or four seconds ahead.
2. Allow at least two seconds distance to the rear.
3. Allow one car width on at least one side.
4. Allow adequate time for maneuvers.

C. Stress that the utilization of the 2-12-Adjust visual rule will:

1. Provide a way out
2. Simplify traffic situations by reducing the number of hazards

Instructional Resources

Pamphlet:

Defensive Driving: Managing Time and Space (AAA)

Information Sheet:

Rules for Maintaining a Good Space Margin (pp. 161)

Transparency:

Maintain a Space Margin (T-25)

Information Sheet:

Rules for Maintaining a Good Space Margin (p. 161)

Films:

A System for the Road (Allstate)

Space Driving Tactics (ODHS)

Learning Activities

8.3 Ask the questions:

- Does a vehicle operator have more control over the space in front of the vehicle or to the sides?
- Which is the hardest to control?

Ask the candidates to describe the two-second rule for safe following distance.

Candidate Resources

Pamphlet:

Defensive Driving: Managing Time and Space

Suggested Reading:

Drive Right, pp. 122-137.

Let's Drive Right, pp. 112-119.

Information Sheet:

Movement within the Traffic Flow

Suggested Content Outline

Instructional Resources

3. Minimize closing probabilities and reduce the chances for getting too close.
4. Avoid becoming a hazard by reducing your chances for making an error.

D. Explain reasons why a tailgater is always the loser. Tailgating causes problems by:

1. Blocking the view of the full picture of traffic ahead.
2. Lessening one's ability to turn into another lane. The turn must be more sharply performed.
3. Shortening the time to react and the stopping distance necessary. This increases the danger of hitting the vehicle ahead and also being hit by a following vehicle.
4. Making it harder to drive in order to be quick enough to mimic the speed changes of the driver ahead.

E. Maintain a 12-second visual lead.

1. The driver should always look ahead well along the intended path of travel.
2. How far ahead one looks, depends on the particular driving situation. As the speed of the vehicle increases, the sight distance ahead must also increase.

Film:

Tailgating—How Close Is Too Close (OTSEC)

Information Sheet:

Following and Being Followed (p. 162)

Learning Activities

Candidate Resources

8.3 Ask the candidates to explain several serious disadvantages for following too closely to the vehicle in front. Illustrate these disadvantages on the blackboard emphasizing how important it is to have enough time to respond and distance to maneuver in case of emergency.

Ask the question: What problems does a beginning driver encounter when sighting directly over the hood while driving?

Information Sheet:

Following and Being Followed

Suggested Content Outline

3. Point out that by looking farther ahead, your eyes are free to look for hazards ahead. Stress that the faster the vehicle travels, the harder it is to identify elements (hazards) to the side.

8.4 Meeting Other Vehicles:

A. The good driver should use timing to decide where and when to meet other vehicles or pedestrians.

B. The driver should always check oncoming vehicles for possible conflict clues (use of signals, edging toward the center line, distracting hazards on the side of the road) and avoid staring at oncoming vehicles or drivers.

8.5 Crossing and Joining Traffic at Intersections:

A. Good driving strategy should consider the types of accidents that can occur at intersections and should help the driver to avoid them.

B. Good approaching techniques include:

1. Adjusting speed to the type of visibility.
2. Checking in both directions for traffic.
3. Checking for traffic from the rear in the rearview mirrors.

Instructional Resources

Information Sheet:

Meeting an Oncoming Vehicle (pp. 163-164)

A Resource Curriculum in Driver and Traffic Safety Education, pp. 55-57.

Information Sheet:

Intersections (pp. 165-166)

Learning Activities

8.5 Ask the candidates to identify some of the types of accidents that occur at intersections. Ask the question: What is the basic cause of most intersection accidents?

Ask the candidates to identify some of the techniques that should be used when approaching an intersection.

Candidate Resources

Information Sheets:

Meeting an Oncoming Vehicle

Intersections

Suggested Content Outline

Instructional Resources

4. Covering the brake in doubtful situations.
5. Being ready to yield when and where necessary, and
6. Stopping early (braking) when the road surface is slippery or when visibility is extremely poor.

C. Uncontrolled intersections:

1. At mid-block analyze the intersection ahead to determine whether your street is protected or unprotected.
2. Check the stopping surface and sight distance available at the intersection.
3. Decide in which direction the longest sight distance lies.
4. When approaching the intersection begin to brake and match speed to available sight distance.
5. Near the intersection scan in the direction of the longest sight distance first, then quickly glance in the opposite direction.
6. At the intersection continue to brake until you are sure that you will not have to stop for any intersecting traffic.
7. At the intersection stop if a vehicle is approaching closely from either direction.

Learning Activities

Candidate Resources

8.5 Ask the questions:

- What is meant by an uncontrolled intersection?
- What actions are required when approaching a blind intersection?

Suggested Content Outline

D. Communicate intentions well in advance of reaching any intersection. A signal of intention is usually required at least 100 feet before turning in the city and at least 250 feet in rural settings. The earlier the signal, the more time you give other drivers to adjust accordingly.

E. Early entry into the appropriate turning lane is important because it reduces the following possibilities:

1. Making a last second lane change.
2. Causing other drivers to make sudden, unexpected driving maneuvers, and
3. Scanning and evaluating conditions at the intersection as you approach from the incorrect lane position.

F. Right-of-way rule concepts

1. Failure to yield the right-of-way is the second most frequent violation of fatal accidents.
2. Most laws specify who is required to yield the right-of-way, not who has it.
3. Right-of-way is something given to you by another driver. (Note: If the driver does not give it to you, do not demand it.)

Instructional Resources

Let's Drive Right,
pp. 171-173.

Learning Activities

8.5 Ask the candidates to state various methods of telling (communicating) other highway users what they intend to do at intersections.

Ask the question: Why is it not realistic to look upon a right-of-way as a guarantee that other drivers are required to yield? What are various ways in which a driver can communicate with other drivers on the roadway?

Candidate Resources

Suggested Reading:

Let's Drive Right,
pp. 172-173.

Suggested Content Outline

4. Never take the right-of-way until you are sure that the other person is yielding.
5. A green light or a stop-protected street does not guarantee you safe passage through the intersection.
6. It is better to yield the right-of-way than to take the right-of-way.
7. Even when another driver is required to yield the right-of-way you can be responsible for a collision if your actions contribute to it, and
8. Give the right-of-way generously. Take it cautiously.

G. Railroad crossings and their dangers. Every driver should always observe three basic behaviors when approaching railroad grade crossings:

1. Vehicle control behaviors—When approaching a railroad crossing control your vehicle by slowing to a speed from which you could stop if necessary.
2. Listening behaviors—Being alert to sounds at railroad crossings. When approaching a crossing, lower the side window and turn down the radio volume. Listen for a crossing bell locomotive whistle or the sound of a locomotive engine.

Instructional Resources

"The Tie You Always Lose," *Family Safety*, Fall, 1978, pp. 20-23.

Information Sheet:

How to Miss the Train (p. 167)

Film:

Gambling with Death (OTSEC)

Learning Activities

8.5 Have the candidate name at least five situations in which the driver must yield the right-of-way.

Ask the questions: What visual clues tell you that you are approaching a railroad crossing? Does a train appear to be going faster or slower than it is actually going? In a large number of railroad crossing accidents, the vehicle runs into the train. Where is the breakdown in the IPDE process when this occurs?

Candidate Resources

Information Sheet:

How to Miss the Train

Suggested Content Outline	Instructional Resources
3. Looking behaviors—The following visual observations should be used when approaching a crossing: • Begin looking (scanning) when you reach the warning sign (round) • Check for the side of the train at night with your high beam headlights and look for the cross-buck on the far side of the tracks • Check for a train on the second or third track after the first train has cleared the crossing, there may be a train coming from the opposite direction. 4. Look for visual clues that warn of a railroad crossing or an approaching train: • Pavement markings • Advance railroad warning sign • Crossbucks • Railroad roadbed • Red flashing lights • Crossing gates • Flagman 5. Avoid mistakes that could lead to a collision with a train: • Overdriving your headlights at night • Waiting for a traffic light or stop sign while parked on a crossing	

Learning Activities	Candidate Resources

Suggested Content Outline	Instructional Resources
- Driving around a lowered crossing gate - Following the lead motorist through the crossing. Always look for an approaching train rather than assuming the way is safe because another car has crossed. - Pulling from behind a passing train before checking for another train	
8.6 Passing Other Vehicles in Traffic: Passing is similar in many ways to changing lanes. However, whenever the vehicle crosses the center line and enters an oncoming traffic lane, you risk the most dangerous kind of accident, a head-on collision.	*A Resource Curriculum in Driver and Traffic Safety Education*, pp. 53-54.
A. Restrictions and legal requirements where passing is prohibited. 1. bridges (two-lane) 2. intersections 3. railroad crossings 4. curves 5. hills	*In-Car Instruction: Methods and Content*, pp. 199-208. Film: *Passing Fancy* (GM) Information Sheet: Passing (p. 168)
B. The decision to pass should be made only when the reason for passing justifies the added risk. Reasons to pass include: 1. Saving time which does not justify the risk involved. 2. An unreasonably slow moving lead vehicle which presents a hazard.	

Learning Activities	Candidate Resources
8.6 Ask the candidates to identify the five locations where restrictions and legal requirements prohibit drivers from passing. Have them identify the reasons for the restrictions.	Information Sheets: Passing Passing Steps
Ask the candidates to identify several reasons for passing. Have them associate the kind of risk involved in each of the reasons.	Suggested Reading: *Learning to Drive*, pp. 131-138.

Suggested Content Outline

C. Passing procedures. Emphasize that passing involves precise timing of each procedure.

D. Being passed

1. Check for possible conflicts with traffic in front and with oncoming vehicles.
2. Maintain speed or slow down to allow the passing car less time to complete the maneuver.
3. Adjust following distance to vehicle in front.

8.7 Driving on Limited-Access Freeways:

A. Characteristics of limited-access freeways include:

1. Interchanges allow for cross traffic on overpasses or underpasses which eliminates intersecting traffic.
2. Acceleration lanes are used to enter the highway and deceleration lanes are used in exiting.
3. Sight distances are good for easy scanning.
4. A median strip of land separates traffic moving in opposite directions.
5. Road shoulders are usually wide and relatively free of obstacles.
6. Adjacent areas are free of pedestrians and other vehicles.
7. Limited-access highways are safe.

Instructional Resources

Information Sheet:

Passing Steps (p.169)

In-Car Instruction: Methods and Content, pp. 272-285.

Film:

Driving on Highways and Freeways (ODHS)

Learning Activities

8.6 Ask the candidates to explain what is meant by "moving through the driver's blind spot quickly" in the passing maneuver.

Ask the questions: What vehicle capabilities affect the driver's decision when passing another vehicle? What problem can you expect when trying to pass a large truck on a downgrade? What extra cautions are needed when passing on the right of another vehicle?

Candidate Resources

Suggested Reading:

Drive Right, pp. 196-217

Let's Drive Right, pp. 212-237.

Suggested Content Outline	Instructional Resources
B. Entering the freeway C. When other vehicles want to enter the freeway, avoid arriving at points of conflict at the same time. Allow the vehicle or vehicles opportunity to enter safely by changing lanes and providing an open lane. D. Exiting the freeway	Information Sheet: Entering Freeway (p. 170) Leaving Freeway (p. 171)
8.8 Adverse Conditions, Driving on Snow and Ice: A. Snow and ice reduce the traction between your tires and the road surface. Reduced traction makes it more difficult to control the movement of the vehicle. Sudden changes in speed or steering adjustments can produce a variety of skids. The risks of skidding to the outside on curves and turns is increased. Braking distances are substantially increased too.	*In-Car Instruction: Methods and Content*, pp. 296-308. Film: *Winter Driving Tactics* (ODHS)
B. Special strategies for driving on snow and ice C. Skid control. Certain general rules which apply to most skidding emergencies include:	Information Sheet: Winter Driving (p. 172)

Learning Activities	Candidate Resources
8.7 Ask the candidates to discuss how they would assist another vehicle in entering the freeway safely. Ask the candidates to identify the procedures, before discussing them in class, for entering and exiting the freeway. Ask the question: Is it more difficult to enter the freeway or exit the freeway?	Information Sheets: Entering Freeway Leaving Freeway Winter Driving Suggested Reading: *Drive Right*, pp 196-217. *Let's Drive Right*, pp. 212-237.

Suggested Content Outline

1. Steer gradually in the direction in which rear end is skidding (countersteering); steering in the opposite direction can cause your car to spin entirely around. Point out the value of always striving to point the car in the same direction (forward) that you want to move the car—this helps greatly.
2. During the skid, avoid slamming on the brake.
3. Avoid using the brake until steering control is reestablished.

D. Emphasize that a substantial adjustment in scanning and evaluating is required to compensate for increased stopping distances on snow and ice.

1. Scan even further ahead with slower speeds and allow for increased stopping distances for yourself and other vehicles. Never assume that other vehicles will be able to stop in the same way they do on dry surfaces.
2. Always anticipate the worst when driving on snow and ice.

Instructional Resources

Learning Activities

8.8 Ask the candidates to name at least five common-sense precautions to take when they expect to drive in snow or sleeting weather.

Ask the candidates to identify the three methods of testing for traction when the road surface has snow or ice on it.

Ask the question: What one response do most beginning drivers do when they go into a skid?

Candidate Resources

Suggested Reading:

Drive Right, pp. 219-231

Let's Drive Right, pp. 238-251

Suggested Content Outline

Instructional Resources

Simulation

8.9 The two hours of simulation and multimedia instruction focuses on major driving environment and complex interaction tasks. The tasks and films selected are consistent with the instruction utilized in the normal driver education program. The following driver tasks are identified:

- Gap selection and judgment
- Two-second following distance
- Twelve-second visual lead
- Operator visual scanning and search pattern
- Utilization of strategies:
    - —minimizing
    - —separating
    - —compromising

A. Simulation Session 1:

This session requires the candidate to apply the IPDE strategies to normal driving situations. The major film content includes:

1. Identifying critical events through proper scanning and searching patterns.
2. Predicting potential conflict ahead.
3. Identifying roadway and traffic characteristics that require the driver to change speed or direction.

Simulation Film 1:
Identifying and Predicting

Learning Activities

Candidate Resources

Suggested Content Outline

B. Simulation Session 2:

Emphasis in this session should be placed on gap judgments (front and behind) and other behaviors associated with crossing, joining, and leaving traffic formations. Film content includes:

1. Judging time, speed and distance.
2. Judging proper time to join and cross traffic formations.
3. Executing maneuvers within time constraints (following vehicles and responding to following vehicles).
4. Joining, crossing, and leaving traffic with minimum risk.

C. Simulation Session 3:

In this session the candidate will be asked to apply previously learned concepts to realistic expressway driving conditions. Emphasis should be placed on predicting conflicts that may occur within changing traffic patterns at expressway entrances and exits and upon successfully planning for and executing joining and leaving maneuvers. Content includes:

1. Utilizing the IPDE concepts (specifically isolating and stabilizing).

Instructional Resources

Simulation Film 2:

Crossing, Joining, and Leaving

Simulation Film 3:

Expressways

Learning Activities

Candidate Resources

Suggested Content Outline	Instructional Resources
2. Executing proper procedures for entering and exiting from a limited access highway.	
3. Selecting proper lane selection and lane changing.	
4. Utilizing the 2-12-adjust in driving.	
5. Recognizing and analyzing potential traffic hazards and the way to avoid these hazards.	
D. Multimedia Session 4: In this session the candidate will be asked to apply judgment and skills necessary for safe and efficient driving under conditions of impaired visibility, reduced road traction, adjusting braking distances and following distances, and recovering from skids. Content includes:	Simulation Film 4: *Adverse Driving Conditions*
1. Minimizing obstruction for adequate visibility during adverse driving conditions.	
2. Reducing the risk of skidding on slippery surfaces by avoiding sudden changes in speed or direction.	
3. Adjusting following distances to provide additional assured clear distance ahead.	
4. Understanding the causes and dynamics of skidding and developing appropriate recovery techniques.	

Learning Activities	Candidate Resources

Suggested Content Outline

Instructional Resources

Behind-the-Wheel Instruction (BTW)

8.10 In the on-street session, the candidate will demonstrate the principles from the classroom and principles and procedures from simualtion instruction. The on-street instructional experience should include:

- One hour of instructor BTW demonstration
- Three hours of BTW driving, observation, and evaluation (one hour of driving, two hours of observation)

The instructional sequence used will be comparable to a typical BTW driver education program. The exception will be in terms of pace and time spent. In order to facilitate this aspect of the program, it is strongly recommended that several experienced driver education instructors assist in teaching the BTW phase. One car and one instructor per three candidates are recommended.

Instructional emphasis will include:

A. Front and behind tasks

- Controlling speed and selecting lanes (position)
- Meeting other vehicles

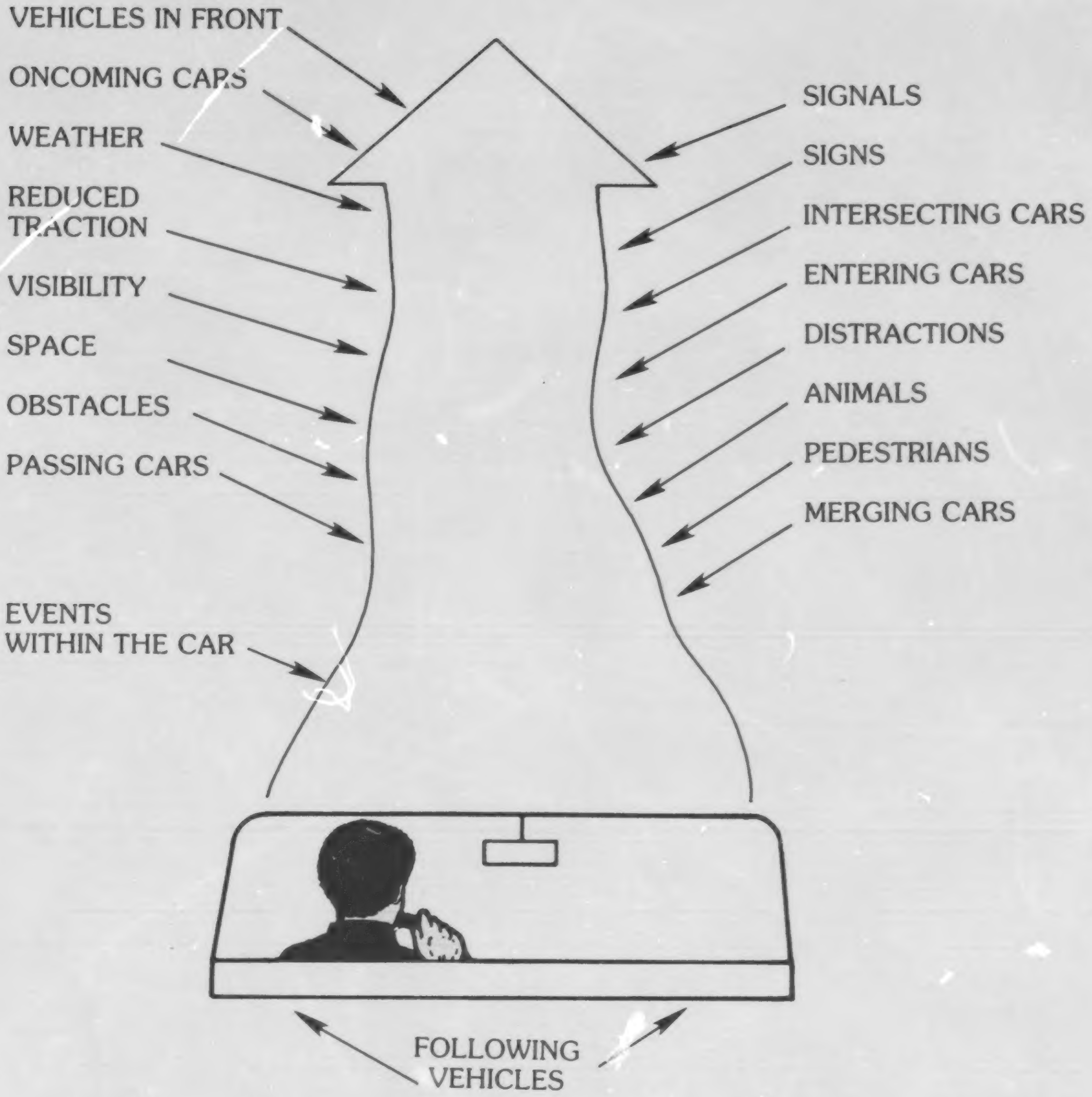
Learning Activities

Candidate Resources

Suggested Content Outline	Instructional Resources
- Following other vehicles (utilize 2-second rule) - Being followed	
B. Crossing, joining, and intersecting with traffic - Observing at intersections - Yielding the right-of-way - Crossing (observing and selecting appropriate gaps) - Turning left - Turning right - Turning left with oncoming vehicle - Turning right with oncoming vehicle - Observing and selecting appropriate gap (uncontrolled intersection) - Blind intersection	
C. Sharing maneuver space - Merging (proper scanning, use of acceleration lanes, blending with traffic, exiting from freeway) - Passing - Being passed	
D. Driving on freeways - Entering and merging - Controlling speed - Exiting	

Learning Activities	Candidate Resources

HAZARDS AND CONDITIONS THAT AFFECT A DRIVER'S PATH OF TRAVEL



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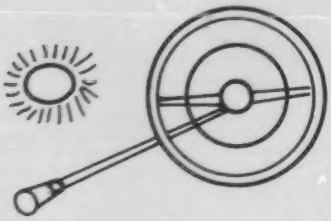
T-23

ENTER TRAFFIC MANEUVER

1. Prepare to Move Car Forward
2. Signal

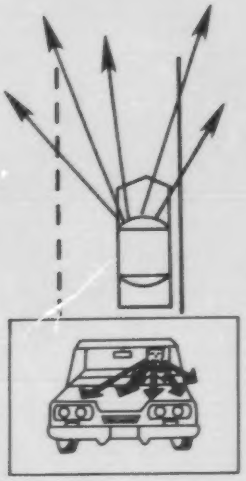


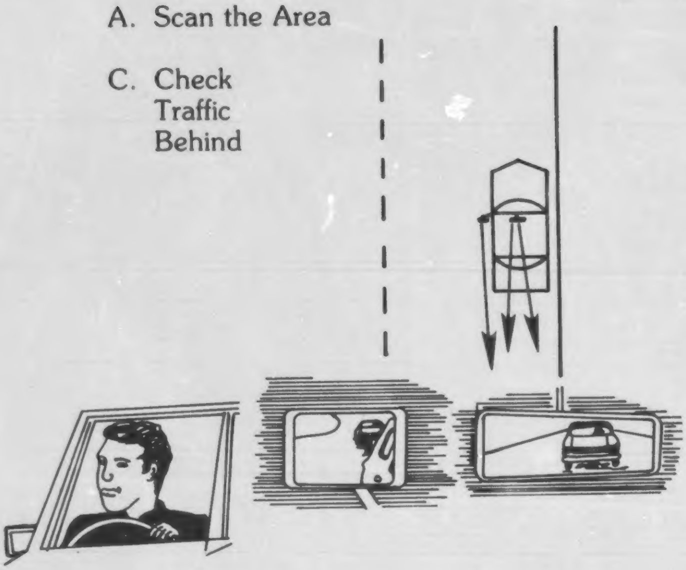
3. Select a Gap in Traffic

You Should:

A. Scan the Area

C. Check
Traffic
Behind





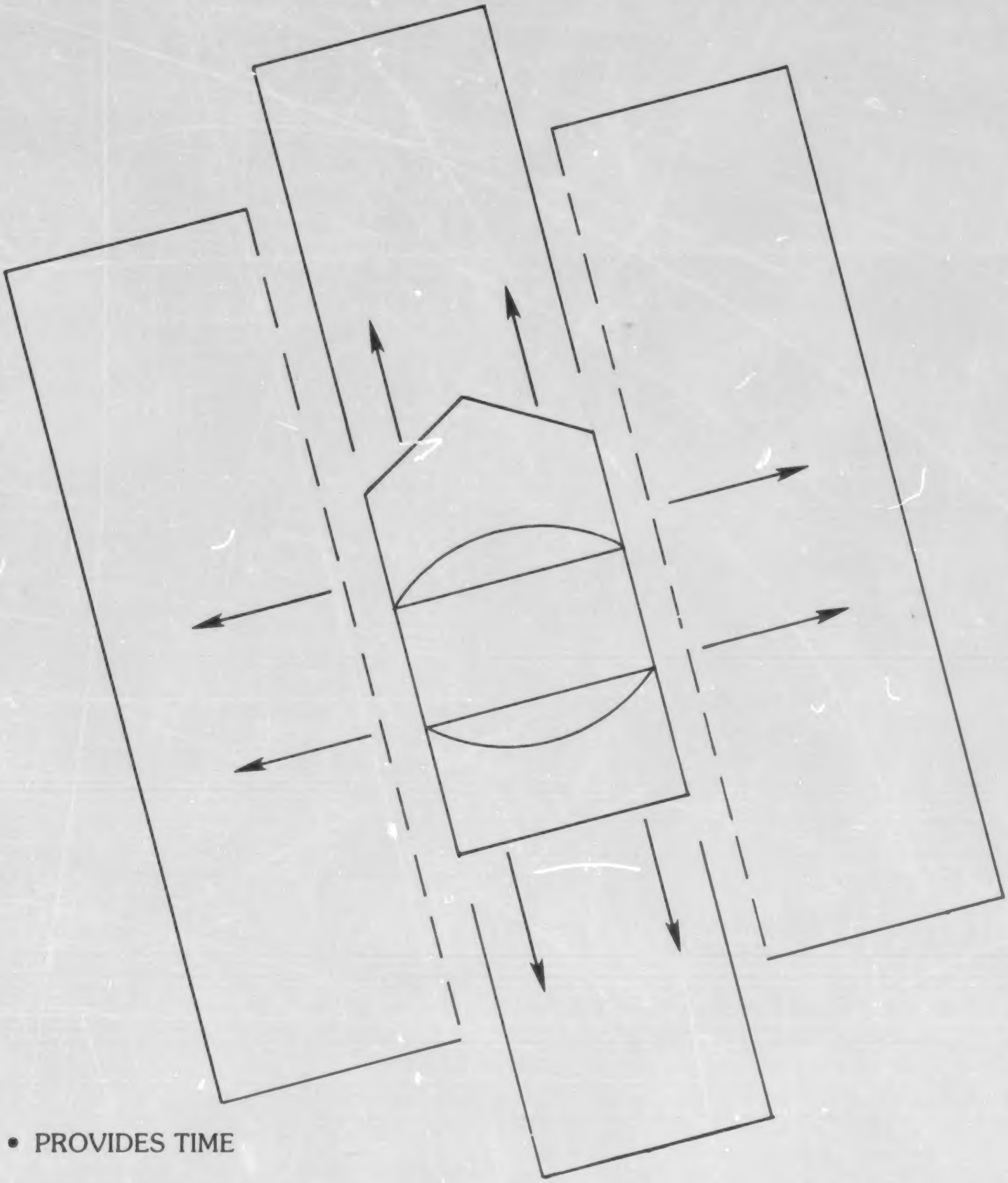
B. Check Traffic Forward

Remember:

To enter traffic in residential and business areas safely you need an 8-second gap to the rear and a clear path ahead.

To enter traffic in rural and controlled access areas safely you need a 15-second gap to the rear and a clear path ahead.

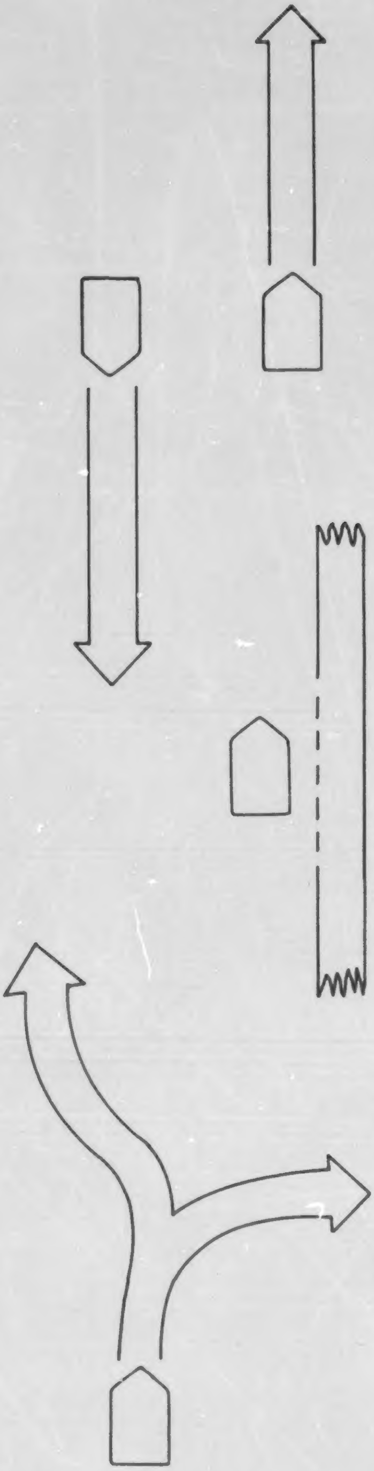
MAINTAIN A SPACE MARGIN



- PROVIDES TIME
- PROVIDES DISTANCE
- PROVIDES VISIBILITY
- PROVIDES MANEUVERABILITY

LESSON 8: INFORMATION SHEET

Rules for Maintaining a Good Space Margin



1. ALLOW AT LEAST TWO OR FOUR SECONDS AHEAD. Under normal conditions the two-second stopping zone provides a minimum distance ahead. An increase in the following distance is recommended for such vehicles as large truck campers and motorcycles. Reduced traction always calls for increased stopping distance.

2. ALLOW AT LEAST TWO SECONDS DISTANCE TO THE REAR. The distance to the rear is more difficult to control. If cars are following too close (tailgating), you should allow more distance ahead. Encourage the tailgater to pass by slowing down or moving to one side. You could be at fault for driving too slow for conditions.

3. ALLOW ONE CAR WIDTH ON AT LEAST ONE SIDE. The distance to the sides should be enough to provide for errors in judgment and for an escape path or out. Therefore, you should try to have at least one car width of space on one side of your car. When practical, it is best to have space equal to one car width on both sides. If you must drive through areas of reduced space then you will want to allow more space in front.

4. ALLOW ADEQUATE TIME FOR MANEUVERS. When you are making certain maneuvers in traffic, you will need to allow plenty of space or gap between the moving vehicles. It is best to measure the amount of space needed in seconds. Here are some approximate or suggested gap times to remember:

   a. Four seconds when changing lanes or merging with high speed traffic.

   b. Six seconds when crossing an intersection.

   c. Eight seconds when entering urban traffic from parked position and when making right or left turns.

   d. Ten seconds when passing another vehicle.

   e. Fifteen seconds when entering rural traffic from stopped position on shoulder of highway.

LESSON 8: INFORMATION SHEET

Following and Being Followed

Points to Remember:

1. A two-second time interval is the best following distance in city traffic.
2. The time interval check is the most reliable method of establishing following distance.
3. You may use a fixed object or a mark on the pavement to establish a proper timed interval.
4. Use the roadside mile posts for checking your following distance on interstate highways.
5. You have the best control over the space ahead of your car.
6. Shrinking distance warns you of a possible stop in traffic.
7. Look over, around, and through the car ahead in traffic.
8. The closer you get to the car ahead, the harder it will be to swerve around it.
9. Do not follow trucks closely because the view ahead is blocked.
10. You can swerve around a car when it is too late to stop for it.
11. Do not relay the left turn signal of the driver ahead unless you are also turning.
12. A panic stop has probably occurred if the rear end of the car raises up when the driver brakes.
13. Allow extra following distance in bad weather.
14. A full-sized car can stop from 20 mph in one and one-fourth seconds.
15. All cars do not stop in the same distance. Small cars can stop faster than large cars. Motorcycles can stop even faster.

LESSON 8: INFORMATION SHEET

Meeting an Oncoming Vehicle

Meeting an oncoming vehicle, particularly on a two-lane road, is potentially the most hazardous situation in driving. An oncoming driver may cross the center line into your intended path as a result of:

1. A momentary distraction
2. Recovery from a pavement drop-off
3. Blinding rain, snow, fog, dust or smoke
4. Poor judgment in passing
5. Swerving to miss a bicycle rider, a pedestrian, a road defect or obstruction
6. Making a turn
7. Excessive speed or lack of control on a curve
8. Falling asleep, or
9. Alcohol or other drug abuse.

To reduce the risk of meeting an oncoming vehicle, the vehicle operator should:

1. Keep as far from the center line as practical and on four-lane roads generally use the outside lane (closest to shoulder);

2. Constantly check the action of oncoming traffic, so that you will be prepared to take evasive action if someone misjudges and comes into your lane;

3. Do not rely on the approaching car's turn signals;

4. Reduce speed on older roads and bridges, unless modernized, because these narrower roads place modern cars dangerously close in passing situations;

5. When lights are called for, always use your low-beam headlights, not your parking lights;

6. At night switch to low-beam headlights and reduce speed on two-lane roads;

7. Flick your lights up and down to signal an oncoming driver that the high beam is blinding; then use the low-beam whether the driver does or not. You cannot improve matters by blinding the other driver and you might contribute to an accident;

8. Condition your mind to the possibility of a vehicle coming across the center line into your path by examining the shoulder and adjacent area and planning an escape route (a ditch is better than a head-on collision);

9. Actually practice evasive steering at lower speeds.

In the event that an oncoming vehicle does pull into your lane, a head-on collision must be avoided at all costs. The best actions are:

1. Brake immediately but carefully to avoid wheel lock-up, blast your horn, and dodge to the right, on to the shoulder, into a ditch, or into any gap that you can create in the line of cars on the right.

2. If necessary, you may have to conflict with vehicles in the right-hand lane to reduce the impact from head-on to sideswiping.

LESSON 8: INFORMATION SHEET

Intersections

When approaching an intersection, special considerations and checks will facilitate safe and efficient progress for the operator. Points to remember:

1. An intersection is not always defined by signs or traffic signals; for example, factory parking lots and shopping center entrances and exits often create hidden intersections in the middle of the block. Rural intersections may be revealed through crossing or turning cars; rows of houses, trees, fences or telephone lines; and signs.
2. An initial scanning of the intersection and traffic to the rear serves to identify those elements which will affect decisions and present potential hazards. Look for traffic controls, impediments to vision, pedestrians at an approaching intersection, and other characteristics of the intersection.
3. An appropriate approach speed—one that is sufficiently low to permit the driver to stop short of the intersection should conditions warrant such a move—depends largely on the traffic controls, traffic volume and how much sight distance the driver has in relation to the intersecting street.
4. The shorter the unobstructed view of the crossroad, the lower the safe speed for approaching the intersection. (May necessitate a stop.)
5. A typical "slow down and look" approach to an uncontrolled intersection requires only a few seconds.
7. To negotiate a signalized or signed intersection, operators must apply additional knowledge and skills.
8. The mere presence of a traffic signal or a sign is a warning of a danger zone, regardless of the color of the light. Occasionally, you will encounter an operator who attempts to beat the light, or one who simply failed to see the light. If an operator is stopped for a red signal and it changes to green, the driver is still required to yield to other vehicles and pedestrians lawfully within the intersection or in adjacent crosswalk at the time the green light is exhibited.
9. Be alert as you approach a stale green light. Covering the brakes (foot poised over the brake) as you approach an intersection minimizes execution time distance should a stop be required.
10. Watching your speed, the signals well ahead, and other clues will help you to pace yourself with the signal's timing, especially if it is a progressive system.

11. Operators approaching a yield sign must slow down, or stop and yield the right-of-way to any vehicle in the intersection or approaching on another highway so closely as to constitute an immediate hazard. Continue to brake as at a stop sign until certain there is no need to stop.

12. Operators approaching a stop sign must stop and yield the right-of-way to any vehicle which has entered the intersection or which is approaching so closely as to constitute an immediate hazard. A stop sign tells drivers that they must stop but does not necessarily tell them exactly where to stop.

13. A flashing red light has the same meaning as a stop sign, a flashing yellow light the same as a slow or caution sign. (Slow down and be prepared to stop.)

14. A green light permits the operator to proceed if the way is clear; it does not assure safe passage through the intersection.

15. When a traffic officer is on duty at a signalized intersection, his or her directions take precedence over the lights.

16. A careful check to the left, straight ahead, to the right, and left again will furnish the driver with the information needed to make a final decision about crossing the intersection. (Each intersection is different and may require a somewhat different search pattern.)

17. A competent operator is marked by the ability to make well-timed and accurate turning movements at intersections.

18. A driver communicates his or her intention to turn by positioning the vehicle in the appropriate lane and flashing the turn signal. At a signalized intersection it may be appropriate to enter the intersection and wait for a safe gap in traffic to complete a left turn movement.

19. Keeping your wheels straight when you stop to wait for a safe gap in traffic to make a left turn minimizes the chances of being driven into the lane of oncoming traffic if struck from the rear.

20. Entering the crossroad close to a right angle when making a left turn at a Y intersection will improve vision and reduce the time your vehicle is in a vulnerable position during the turning process.

21. Wait to make your turn onto a main highway until you have space and time to gain cruising speed without interfering with the progress of other vehicles.

22. Conflicts at intersections are reduced by turning into the first lane going in your direction. Traffic engineers sometimes modify this principle to meet local conditions.

LESSON 8: INFORMATION SHEET

How to Miss the Train

If you recognize every railroad grade crossings as a life-and-death hazard, chances are you'll cross safely. Remember these tips:

1. Slow down when you see the round yellow advance warning sign. When you come to the crossing, look both ways, even if the lights are off and gates are up. They might be malfunctioning. Never disregard signal lights or drive around gates. If you are tempted to race a train across the intersection, remember you are gambling with your life.

2. Be cautious when crossing the tracks after a train clears the intersection; there may be another train on a second track. Wait for the flasher lights to stop.

3. If traffic is heavy, do not drive onto the railroad tracks unless there is room for your vehicle on the other side.

4. If you take the same route very often, it is easy to daydream and forget to watch for trains. And do not neglect to look because you think you know a train schedule by heart—there may be an extra train, or a scheduled train may be early or late.

5. If you are on the tracks when the flashers start or the gates start down, keep going. That is you have at least 20 seconds before the train reaches the crossing. If you stop and back up, you might kill your engine and yourself.

6. At night, do not drive so fast you can not stop with the distance illuminated by your headlights. That is called overdriving your headlights, and it is one way of running into the side of a train.

7. Be especially careful if weather conditions cut visability. Do not drive with a fogged-up or iced-over windshield or limit your ability to hear warning bells and whistles by turning your radio too loud; do not let conversation with passengers distract you.

8. Be aware that the law requires some vehicles to stop at all railroad crossings. Be alert for these vehicles—school buses, taxicabs, and trucks carrying flammables, explosives or other dangerous cargoes.

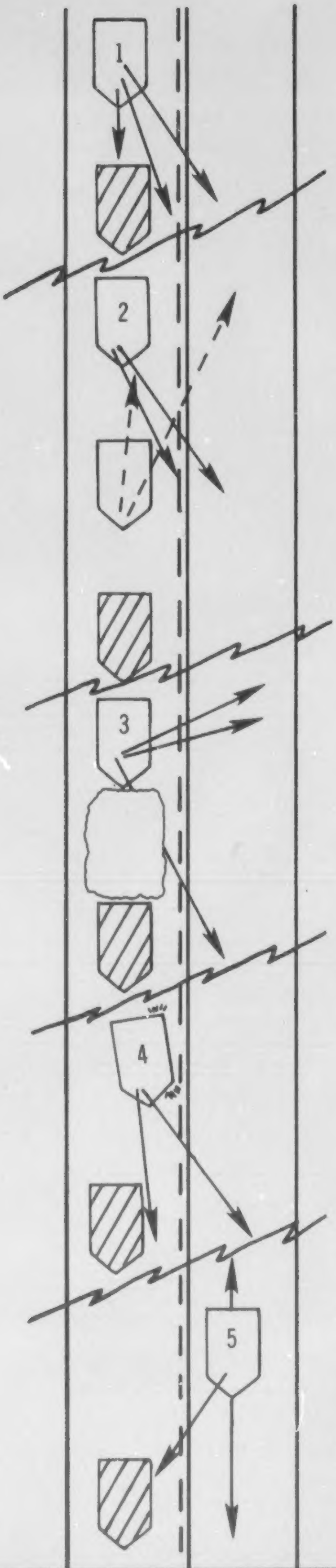
9. If your car should stall on the tracks, get out immediately and look down the tracks in both directions. If a train is approaching, abandon your car and run in the direction of the train so you will not be hit by flying debris. If there is no train in sight, you may be able to save the car. First, post lookouts; ask passers-by to help if you have no passengers. If your car has a manual transmission and is an older model, you may be able to use the starter to move it. Put the transmission in first gear or reverse, let out the clutch, and turn the key to start. Do not forget to watch for trains. No car is worth your life.

LESSON 8: INFORMATION SHEET

Passing

1. Passing is one of the most potentially dangerous maneuvers performed in traffic.
2. A driver must know the capabilities of his or her vehicle in order to pass safely. Engine and suspension defects can seriously affect the safety of passing.
3. A driver must have a clear notion of an acceptable passing situation. For example, the oncoming car should appear to be standing still before passing should be considered. This is true at all speeds.
4. It is dangerous as well as illegal to speed up when you are being passed.
5. The higher the speed, the greater the distance required to pass another vehicle.
6. Looking over, around and through the car you wish to pass can provide valuable information about possible problems the driver ahead may be facing.
7. On hilly roadways, it is best to pass a truck just past the crest of the hill before the truck gains downhill speed.
8. Never pass a slow-moving vehicle at a high rate of speed. Passing at a lower speed will allow you to stop easier if the slow-moving vehicle should suddenly move into your path. The greater the speed differential when you are passing a slow-moving vehicle, the greater the risk you are taking.
9. Don't be afraid to give up a passing attempt if problems develop before you complete the pass.
10. Passing is more difficult at night because judging distance is more difficult than during the daytime.
11. As traction and visibility decrease, the advisability of passing also decreases.
12. A driver must know the time and distance required to pass in order to select a safe passing situation.
13. The closer you get to the car ahead before passing, the harder it will be to see and steer around it and the shorter the distance you will have in which to gain speed for passing.
14. The closer you get to the top of a hill, the shorter the sight distance and the more dangerous passing becomes.
15. The longer you wait to decide whether or not to pass when approaching a slow-moving vehicle, the greater the likelihood of a sudden braking and steering action. Make your decision early.
16. Avoid passing a vehicle parked along the highway if passing would cause you to meet an oncoming car at the same time.

LESSON 8: INFORMATION SHEET



Passing Steps

1. Is it clear to pass safely?

6. Maintain a safe space cushion. Keep checking ahead.

2. Will it remain clear?

7. Check car and blind spot over your right shoulder. When you see the headlights in your rearview mirror, start your return.

3. Is anyone passing you? Maintain adequate space cushion in front of your car.

AVOID riding too close to car in front…takes longer to pass and the initial steering will need to be greater.

8. Leave enough room to return safely.

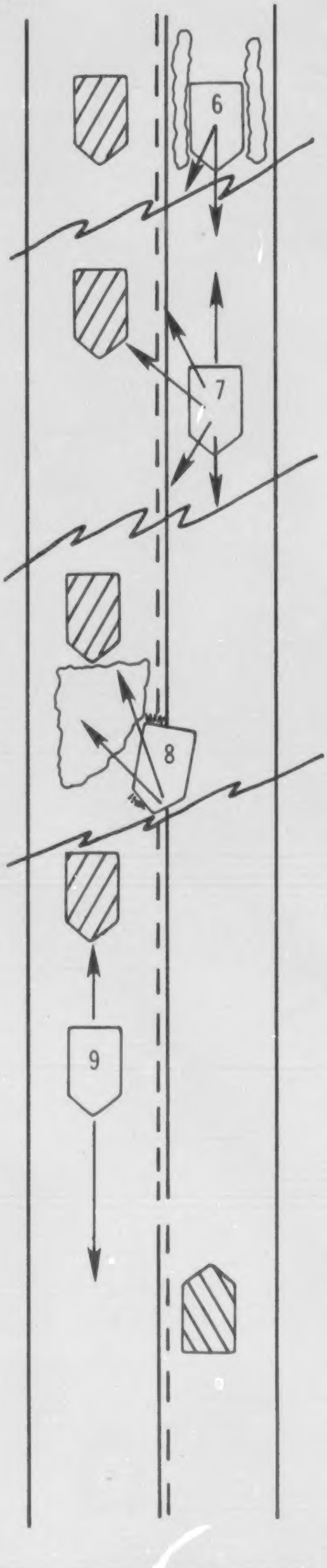
4. Signal your intentions left to pass the vehicle ahead. Scan well ahead to your car to see if your path is still clear.

9. Resume safe speed.

Accelerate to 15 mph greater than the vehicle you are passing. You need this 15 mph superiority to pass safely.

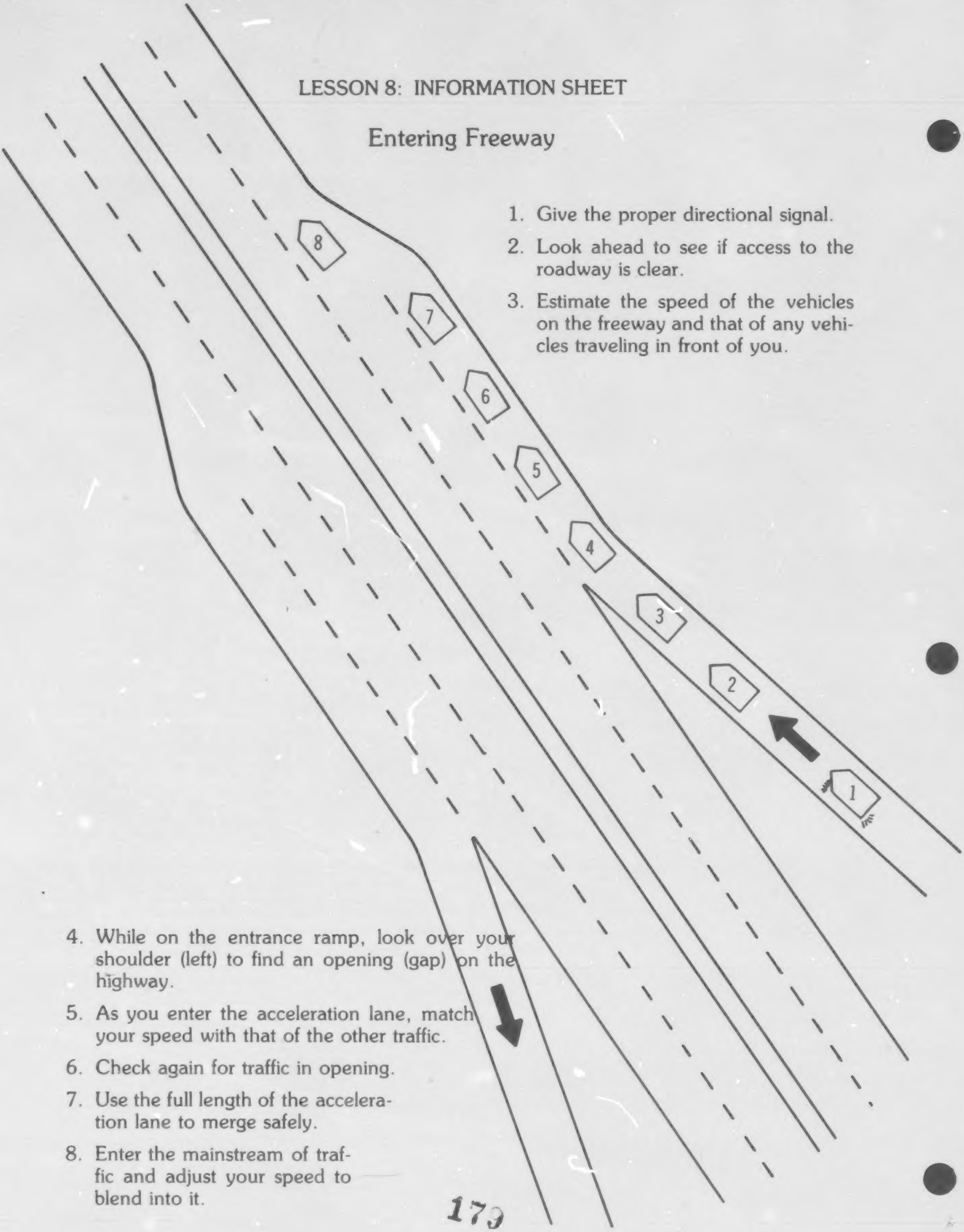
10. Total passing maneuver should take no more than 12 seconds.

5. The point of No Return or the Decision point. Either you complete the passing maneuver or you abort it and return to the original lane. You might have to brake pretty hard.



LESSON 8: INFORMATION SHEET

Entering Freeway

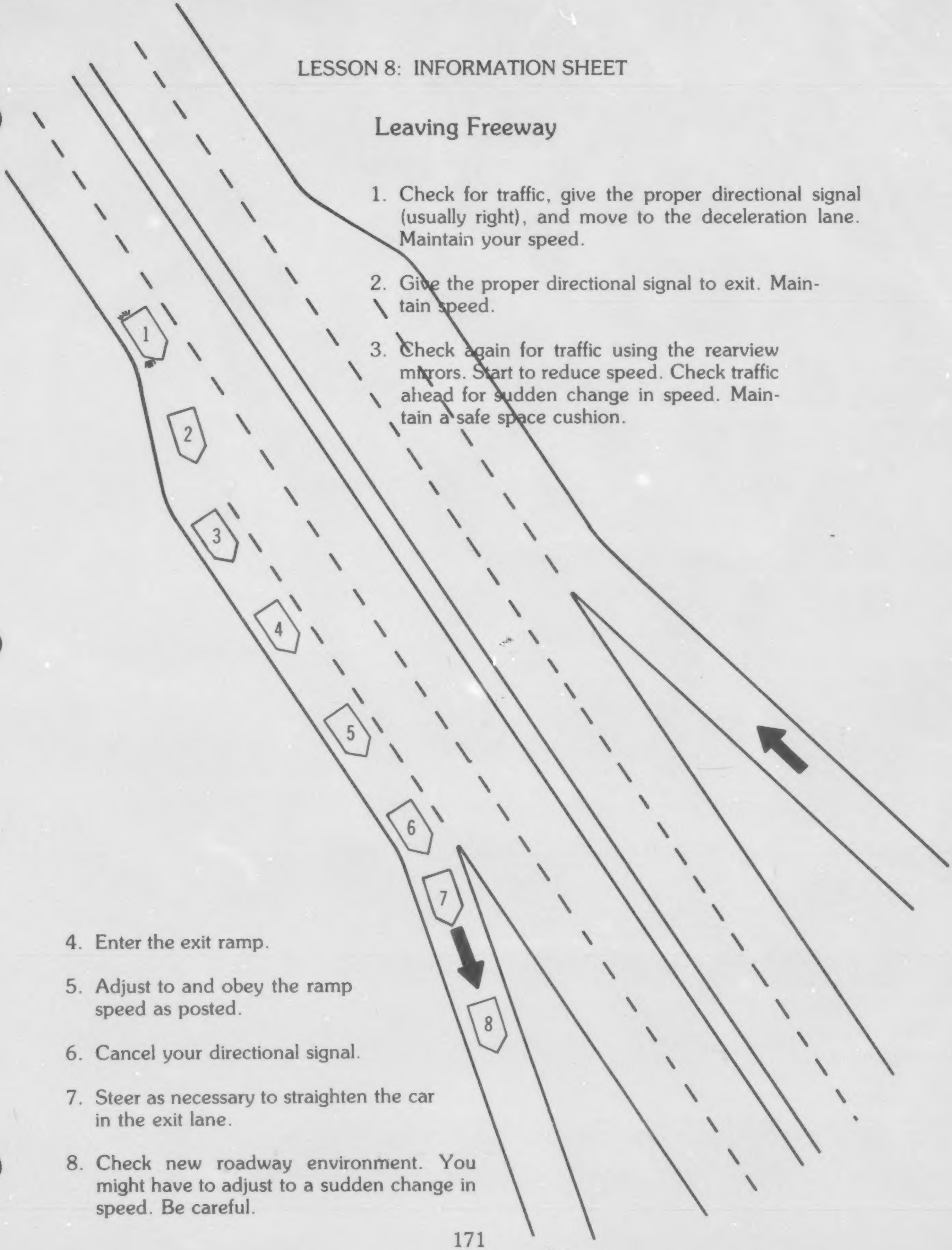


1. Give the proper directional signal.
2. Look ahead to see if access to the roadway is clear.
3. Estimate the speed of the vehicles on the freeway and that of any vehicles traveling in front of you.
4. While on the entrance ramp, look over your shoulder (left) to find an opening (gap) on the highway.
5. As you enter the acceleration lane, match your speed with that of the other traffic.
6. Check again for traffic in opening.
7. Use the full length of the acceleration lane to merge safely.
8. Enter the mainstream of traffic and adjust your speed to blend into it.

LESSON 8: INFORMATION SHEET

Leaving Freeway

1. Check for traffic, give the proper directional signal (usually right), and move to the deceleration lane. Maintain your speed.
2. Give the proper directional signal to exit. Maintain speed.
3. Check again for traffic using the rearview mirrors. Start to reduce speed. Check traffic ahead for sudden change in speed. Maintain a safe space cushion.



4. Enter the exit ramp.
5. Adjust to and obey the ramp speed as posted.
6. Cancel your directional signal.
7. Steer as necessary to straighten the car in the exit lane.
8. Check new roadway environment. You might have to adjust to a sudden change in speed. Be careful.

LESSON 8: INFORMATION SHEET

Winter Driving

Starting Your Car

1. Be sure your front wheels are straight to avoid skidding and to aid in moving in deep snow.

2. Use moderate acceleration. If the rear wheels spin, cut the power and then feed less gas.

3. Put your car into motion slowly. Starting abruptly or speeding up quickly can cause skidding. Because of this, wait for longer traffic gaps before making traffic maneuvers on ice or snow.

Stopping Your Car

1. Begin stopping earlier than you would on dry pavement. Use light pressure on the brake pedal.

2. A braking skid resulting from locked brakes will usually cause your car to follow the slope of the road. Since the wheels are locked, you cannot steer to change the direction of the skid. Let up on the brakes and the car will right itself.

3. The pavement is usually slicker the closer you get to an intersection. Remember this when braking as you approach an intersection.

4. Approach uncontrolled intersections with extra caution.

5. Avoid stopping on an upgrade if possible.

Steering Control

1. If your wheels cannot roll because of locked brakes, you have no steering control.

2. The steering wheel will not unwind or return to center steer when you are driving on ice or snow as well as it will when driving on dry pavement.

3. Use caution when turning off a heavily traveled street onto a side street. The side street will probably be icy.

4. Press lightly on the accelerator when turning. The right amount of acceleration for a turn on dry pavement is too much for a turn on an icy street.

LESSON 9: In-Vehicle Methods and Support

Time: 1 1/2 Hours

Overview: The purpose of the lesson is to present administrative, teaching and support requirements for planning effective behind-the-wheel instruction. Pay particular attention to the criteria for selecting instructional methods and the appropriateness of the method. The content presented here is reinforced when the candidates put the information to use in planning and teaching behind-the-wheel lessons.

LESSON OBJECTIVE: Candidates will practice the skills and activities and identify the support activities needed to instruct high school driver education students.

Instructional Concept:

Classroom theory is combined with actual hands on experience. Be sure the activities are properly executed so that correct habits are reinforced.

Suggested Content Outline	Instructional Resources
9.1 General Objectives of Behind-the-Wheel Instruction: A. To be prepared with minimum performance capabilities for entry into the highway transportation system as motor vehicle operators. B. To develop visual and perceptual skills to a minimum level of proficiency in the safe operation of a vehicle. C. To learn and apply basic maneuvers to operate a vehicle safely. D. To learn and apply basic evasive action maneuvers necessary to avoid critical path crash situations. E. To apply the above to a variety of traffic environments (including night driving) with skills and proficiency to a minimum level of safe performance in order to instruct high school driver education students.	*Driving Task Instruction*, pp. 50-51.
9.2 Advantages and Disadvantages of Behind-the-Wheel Instruction:	Transparencies: Advantages of Behind-the-Wheel Instruction (T-26) Disadvantages of Behind-the-Wheel Instruction (T-27)

Learning Activities	Candidate Resources
9.2 Ask the candidates to identify several advantages of the behind-the-wheel phase of instruction. Ask the candidates to identify several disadvantages. Discuss the advantages and disadvantages.	

Suggested Content Outline

Instructional Resources

9.3 Behind-the-Wheel Administration Overview:

A. Divided class into BTW groups—10 to 12 groups of three or four students.

B. Driving sessions 12 to 20 minutes per student based on class period length.

C. Advantages of short sessions within short overall program (6 weeks of driving).

D. Disadvantages of short session:

1. Not enough behind-the-wheel time to instruct
2. Limits distance the vehicle can travel from the school
3. Absence is critical to completion of the required number of hours (6 hours).

E. Advantages of longer sessions over a full semester (18 weeks)

F. Disadvantages of longer sessions:

1. Too much time between lessons
2. Student retention level is low; need to often review material; waste time
3. Boredom of observers

G. Length of group assignments:

Learning Activities

Candidate Resources

9.3 Ask the question: What are the disadvantages of long driving sessions? What are the disadvantages of short sessions with at least three students per group?

Ask the candidates to describe what they feel might be the ideal length of time for driving and number of students per vehicle.

Suggested Content Outline

Instructional Resources

   1. Six hours of BTW driving
   2. 18 hours of observation
   3. 12 to 18 sessions depending on the class period length and size of the groups

H. Driver rotation:
   1. Equal time for each student
   2. Equal driving experiences
   3. Equal task complexities and difficulties
   4. Development of driver behavior

I. Observers roles:
   1. Participation in lessons (evaluating, describing, identifying)
   2. Participate in answering questions
   3. Complete checklists

J. Types of schedules:
   1. Block (separate from the entire instructional program—after school or before school)
   2. Integrated (included as part of classroom lessons)
   3. Scheduled cycle (rotation through course or semester)

K. Record evaluation requirements:
   1. Instructional purposes
   2. Vehicle records
   3. Evaluation (sessions, students entire course)
   4. Grading students driving practice

Learning Activities

Candidate Resources

9.3 Ask the candidates to describe some of the effective techniques they might use to involve student observers. Compile a list and distribute to candidates for use in the driver education car.

Ask the candidates to identify problems in grading student drivers.

Suggested Content Outline

9.4 Preparing to Teach:

- A. Identification of sessions, session sequence, and objectives
- B. Route selection and specifications
  - 1. Traffic characteristics
  - 2. Length of travel necessary
  - 3. Time of day (amount of traffic)
  - 4. Driver rotation locations
- C. Preview of individual routes and review where necessary
- D. Student preparation
  - 1. Classroom preparation
  - 2. Route activity
  - 3. Observer's responsibilities
- E. Teacher preparation
  - 1. Getting the vehicle ready and keeping it in good mechanical condition
  - 2. In-vehicle aids
  - 3. Teacher positioning
    - Right side
    - Belted
    - Good view of the road and student
    - Left hand capable of reaching major vehicle controls
    - Right or left foot near brake

Instructional Resources

Information Sheet:

Behind-the-Wheel
Instructional Sequence
(pp. 186-187)

Learning Activities

9.4 Ask the questions: Do you feel that the classroom instruction should serve as the only student preparation for the BTW instruction? How important is a good instructor demonstration and description of the skill to be learned?

Candidate Resources

Information Sheet:

Behind-the-Wheel
Instructional Sequence

Suggested Content Outline

9.5 Teaching Methods:

The instructor should spend considerable time identifying, describing, and illustrating the session and driver tasks in which various methods would be employed.

A. Instructions: Lowest level of training method.

1. What to do
2. Requirements (specific)
    - Clear
    - Short
    - Simple
    - Identify location before activity starts
    - Have students repeat if necessary
3. Major uses in:
    - Route guidance
    - Basic control sessions and drills
    - Beginning of lessons

B. Drill: Repeat application of steps and specific procedures.

C. Demonstration: Ordinarily, the first step in teaching complex motor skills. Stress, how-

Instructional Resources

In-Car Instruction: Methods and Content (2nd ed.), pp. 33-44.

Learning Activities

9.5 Write several key words in driver education BTW instruction on the board and ask some of the candidates to give instructions as they would if they were instructing students. Have the other candidates evaluate each instruction. Repeat using the other candidates until all the candidates have a chance to give some instructions.

Candidate Resources

Suggested Reading:

In-Car Instruction: Methods and Content, pp. 33-44.

Suggested Content Outline

Instructional Resources

ever, that demonstrations can have only a limited effect on the student's eventual acquisition of the motor skills involved.

Be sure the student has an appropriate model to follow.

1. Stress that the instructor should demonstrate only when necessary; use student demonstrations whenever possible or appropriate.
2. Demonstrations of complex skills should be simplified and should emphasize only the most critical aspects of performance.
3. Stress that long demonstrations mean lost driving time.

D. Coaching: Taking candidates through a task or providing verbal cues. Use cues only when they are necessary to help the student (especially during basic control sessions).

E. Part and whole teaching: Breaking the task down into small parts and, when students perform each part, putting the components together to perform the task. For example: concentrating on steering during early turning practice without including signaling or visual checks.

Learning Activities

Candidate Resources

9.5 Ask the questions:

- Why should the instructor avoid doing too much when demonstrating?
- Why should the instructor avoid demonstrating a skill too fast?
- Why is it important to make all verbal cues (coaching) clear, concise, accurate, and well-timed?
- What are the advantages of breaking skills down into parts to teach individual students?

Suggested Content Outline

Instructional Resources

F. Commentary driving: The driver or observer comments on significant events in the driving scene. A shorthand language is used (e.g., car ahead, green, pedestrian). Use the method only after students master basic control tasks. Explain the difference between limited commentary driving and commentary driving.

1. Use during beginning stages of normal driving to help the instructor see:
    - How the students' visual scanning and searching skills are developing, and
    - How the development of the IPDE perceptual development is progressing.
2. Use to have students make various eye checks (mirrors, gauges, blind spots).
3. Use for involvement and participation by student observers.
4. Use to assist in the evaluation of student progress and instructor effectiveness.

G. Talk through: The instructor provides the driver information by talking about lesson tasks.

Learning Activities

Candidate Resources

9.5 Ask the candidates to describe various reasons for using limited commentary driving and commentary driving.

Ask the question: What are the advantages of providing the driver information by talking him or her through various parts of the lesson?

Ask the candidates to describe how they feel feedback should be given to beginning student drivers. When should feedback be given?

Suggested Content Outline

Instructional Resources

This can be used to:

1. Explain how to handle situations,
2. Determine what to look for, and
3. Give the driver praise.

H. Feedback: To improve performance, students must have information (feedback) about their actions. (Note: In many cases students are unaware of their errors and mistakes. In such cases, it is the instructor's responsibility to make students aware of the errors as well as their success.)

1. Limit the amount of feedback in terms of the students' capabilities for utilizing it.
2. When necessary, indicate the appropriate corrective action. For example, merely telling the student that the turn was too wide may not be adequate because there are several alternative corrective actions:
    - Slower speed,
    - Earlier initial steering, or
    - Quicker steering.
3. Always provide the student with an immediate opportunity to correct errors by performing the skill again.

Learning Activities

Candidate Resources

9.5 Ask the questions:

- What problems occur when the instructor gives the students too much feedback?
- How important is it for the instructor to give praise to the beginning student driver?
- When do you stop giving praise?

Suggested Content Outline

Instructional Resources

4. When appropriate, verbally reinforce corrected performance with praise.

I. Destination driving: A procedure employed in an area familiar to the driver. The instructor has the student drive to a specific location. This method tends to relax students, and they tend to drive more as they would when not in the company of the instructor. Note: As an alternative method, allow the students to select their own route. This should only be used after basic control tasks are mastered.

J. Manual assistance: Helping students perform or avoid problems while driving. Use:

1. During basic control tasks such as stopping and turning corners, or
2. During normal driving situations to avoid possible or serious collisions where the student is unaware of the problem.
3. Type of assistance:
    - Dual control—stopping and speed control
    - Steering—assists or demonstrates
    - Disengaging power
    - Removing student from controls

Learning Activities

Candidate Resources

9.5 Ask the questions:

- What advantages are there in allowing students to select their own route?
- If you must assume manual control of the vehicle, is it important to tell the student why?
- What hand should you keep free to assume control of the steering wheel or to disengage the power to the vehicle?

Suggested Content Outline

Instructional Resources

9.6 Support Equipment and Materials:

A. Items to be carried in the driver education vehicle include:

1. Clipboard
2. Lesson plan booklet
3. Evaluation instruments or forms
4. Driver license (instructor)
5. Car registration
6. Insurance identification papers
7. Identification papers
    - Name, school address and phone number,
    - Who to contact in case of emergency,
    - Listing of hospitals, doctors, and emergency squad
8. Accident forms and accident information
9. First aid kit
10. Flares or markers
11. Fire extinguisher
12. Seat cushions
13. Scraper for ice and cloth to wipe interior windshield
14. Chains (if necessary)
15. Jumper or booster cables
16. Tissues and waste bag
17. Flashlight

Learning Activities

Candidate Resources

9.6 Ask the candidates to identify some of the important support equipment and materials that should be included in the driver education vehicle.

ADVANTAGES OF BEHIND-THE-WHEEL INSTRUCTION

1. Provides real traffic experience.

2. Provides direct instruction under the supervision of a qualified instructor.

3. Provides immediate application of lesson to the driving scene.

4. Provides for planned logical learning sequences.

5. Provides for observation time that enhances the total laboratory learning process.

DISADVANTAGES OF BEHIND-THE-WHEEL INSTRUCTION

1. Student-teacher ratio is comparatively low.

2. Financial consideration when accommodating over 300 students per year.

3. Temptation to do nothing but drive in a restricted protected area.

4. Difficulty in locating satisfactory driving areas in large metropolitan cities.

5. Limits the driving areas due to economics of purchasing gas and maintaining the vehicles.

6. Difficulty in guiding individual students based on personal needs (number of students too large).

LESSON 9: INFORMATION SHEET

Behind-the-Wheel Instructional Sequence

TASKS	SESSIONS	TRAINING EMPHASIS	TRAINING ENVIRONMENT
Basic Control Predrive Prestart Starting Moving Stopping	1	Procedures	Residential, Parking lot, Range
Changing Direction Entering from curb Lane change Left/right turns	2	Procedures Visual Scanning	Parking lot, Residential
Basic Maneuvers* Backing Turnabouts Parking	2	Procedures	Residential, Parking lot
Normal Driving Cruising Meeting Following Intersecting	4	Visual Lead Requirements and Strategies	Two-lane highway, Light to moderate traffic,-moderate speed
Advanced Driving Passing Being passed Merging Entering Exiting	3	Visual Lead Requirements, IPDE Strategies	Open rural highway, Limited access highway, ramps, Higher speeds
Environmental Factors Rain Snow-ice Fog Night	2	Visual Lead requirements, IPDE strategies	Any roadway or area

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*Maneuvers may be taught any time following basic control. Placement in this sequence permits student practice throughout the course when the occasion arises.

TASKS	SESSIONS	TRAINING EMPHASIS	TRAINING ENVIRONMENT
Vehicle Emergencies*	2	Visual Lead Evasive strategies	Parking lot, Range
Blowout Brake failure Engine stalls Hood flies up Lights fail			
Collision Avoidance	1	Procedures, Visual Lead	Parking lot, Range
Emergency stop Evasive maneuvers Off-road recovery Skids			
Evaluation	1		Designated route
Specific tasks			

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*Handling car emergencies depends on special equipment which is not generally available in most driver education programs.

LESSON 10: Behind-the-Wheel Lesson Planning

Time: 4 1/2 Hours

Overview: This unit provides an opportunity for the candidates to plan, develop, and write specific lesson plans for BTW instruction. The first part of this unit establishes basic lesson planning requirements. The daily lesson plan which follows is designed for use in those driver education programs where the dual-control (BTW) method of instruction is the principal method of teaching beginning drivers. The lesson represents a basic in-car lesson plan using a vehicle with automatic transmission.

In part two of this lesson, the candidates will develop lesson plans. The following guidelines are used in the lesson planning.

- One-hour teaching blocks
- Three students per vehicle
- 20 minutes of actual driving per student
- Six hours of in-car instruction (18 sessions x 20 minutes)

LESSON OBJECTIVE: The candidate will write lesson plans for teaching BTW instruction. Each lesson will include selecting: (1) training experiences, (2) routes, (3) exercises, and (4) activities that support the specific objectives of BTW instruction.

Instructional Concepts

1. Select teaching methods and techniques which best accomplish the general objectives of behind-the-wheel instruction.
2. Each in-car lesson should be well planned and carefully thought through, utilizing a logical pattern of instruction.
3. Each written performance objective should be developed in accordance with specific observable and measureable performances.

Suggested Content Outline

10.1 Lesson Plan Format:

- A. Unit identified by title
- B. Task defined (individual performances)
- C. Performance objectives written in observable performances
- D. Session or lesson # ____
- E. Training environment:__________
- F. Driving skills (diagrams)
  1. Identify what the driver will be doing and how
     - Procedures: individual steps
     - Processes: driving strategies necessary (i.e., visual lead, two-second following distance)
  2. Route characteristics: General locations should be specified (area and type of roadway)
  3. Planned stops: Places where stops will be made for driver rotation, review, and special instructions
  4. Support equipment and materials

Instructional Resources

Information Sheet:

Behind-the-Wheel Instructional Sequence (pp. 186-187)

Lesson Plan Format (p. 191)

Learning Activities

10.1 Have the candidates practice writing performance objectives using the following words: demonstrate, drive, describe, and discuss. Have several candidates read their objectives to the entire class for evaluation. Have the entire group work together to write the performance objectives for all the lessons in behind-the-wheel instruction.

Candidate Resources

Information Sheet:

Behind-the-Wheel Instructional Sequence

Lesson Plan Format

Suggested Content Outline	Instructional Resources
G. Lesson introduction: Identifies the areas of emphasis in the lesson. Items included are individual tasks, driver processes, special procedures, and evaluation responsibilities H. Instructional techniques: Techniques that will assist in making the lesson better understood I. Session review: discussion of lesson and additional information including: • Problematic areas • Individual student problems • Practice suggestions • Other 10.2 Development of Lesson Plans:	

Learning Activities	Candidate Resources

LESSON 10: INFORMATION SHEET
Lesson Plan Format

LESSON: Basic Control

TASK: Entering Roadways (Traffic)

SESSION 1: TRAINING ENVIRONMENT: School Parking Lot, Residential

PERFORMANCE OBJECTIVE: Include a verb denoting an observable action written in terms of measurable learner performance. Include, if possible, a description of the stimulus being responded to and desired adequacy of the action.

Student Performance	Instructor Performance	Action
The student will: • Execute starting procedure. • Move car from parked position. • Safely enter and blend into flow of traffic. • Demonstrate selection of safe speed control.	• Direct student to execute starting procedures. • Place emphasis on visual checks, signal, and steering actions in moving from curb. • Stress that speed, lane selection, and lane placement must be monitored and feedback provided to all other drivers. Preparation: • Assign most qualified student to drive first. • Never allow driver to enter traffic without looking or signaling. To do this is giving tacit approval of practicing the wrong way. When this happens, stop the car in a safe place and allow it to move only after driver has performed correctly (looked, signaled, and yielded). Instructional techniques: **Instructing** students on basic procedures, **talking** through specific steps on entering traffic and selection of safe speed, and providing **feedback** when student makes mistakes in moving car from parked position and blending into the stream of traffic.	Procedures: Starting and entering traffic flow Processes: Visual lead techniques Route characteristics: Lanes marked in the school parking lot; isolated residential street Planned stops: Smith and Jones Road Center Road Ridge Road Session review: Visual lead Check blind spot (s) Good lane placement Problems: 1. 2. 3. Practice suggestions:

LESSON 11: Behind-the-Wheel Instruction

Time: 6 3/4 Hours

Overview: Each candidate will teach three separate planned lessons. The first two hours will involve the utilization of students or candidates as student drivers. Each group will have three students or candidates and one master instructor. The schedule for the first two hours includes:

10 minutes	Opening remarks by instructor
25 minutes	Candidate **A** teaches; **B** observes; **C** drives (Instructor evaluates from back seat using Behind-the-Wheel Evaluation form.)
25 minutes	Candidate **B** teaches; **C** observes; **A** drives
25 minutes	Candidate **C** teaches; **A** observes; **B** drives
25 minutes	Instructor discusses problems with group.

During the final four and one-half hours, each group of candidates will instruct several student drivers. From selected lessons, each candidate will teach three 25 minutes lessons. When not instructing, each candidate will engage in observation and evaluation of other teaching candidates. Each group will be observed and evaluated by the master instructor. Review of each candidate will take place in the final session. The schedule for the final four and one-half hours will include:

25 minutes	Candidate	A	teaching student driver	1
25 minutes	Candidate	B	teaching student driver	2
25 minutes	Candidate	C	teaching student driver	3
25 minutes	Candidate	A;	student	2
25 minutes	Candidate	B;	student	3
25 minutes	Candidate	C;	student	1
10 minutes	Break			
25 minutes	Candidate	A;	student	3
25 minutes	Candidate	B;	student	1
25 minutes	Candidate	C;	student	2
5 minutes	Break			

Behind-the-Wheel Evaluation

Candidate Name: ______________________________ Evaluation # ________

Directions: Evaluate by circling appropriate performance. Write criticism on those items that need improvement.

1. The candidate instructor gives clear and precise descriptions and directions. YES NO Not Applicable

   Comments:

2. Where necessary, the candidate instructor had student repeat the directions to make sure student understands and follows them correctly. YES NO Not Applicable

   Comments:

3. The candidate instructor tells the student exactly what route to take. YES NO Not Applicable

   Comments:

4. The candidate instructor expertly demonstrates the driving maneuver (when necessary). YES NO Not Applicable

   Comments:

5. The candidate instructor has student perform certain driving skills to help master a maneuver (where necessary). YES NO Not Applicable

   Comments:

6. The candidate instructor uses charts and demonstrations to clarify an explanation of a maneuver (where necessary). YES NO Not Applicable

Comments:

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7. The candidate instructor effectively analyzes student's good driving actions by providing different forms of positive reinforcement (where necessary). YES NO Not Applicable

Comments:

8. The candidate instructor effectively analyzes student's driving performance by (1) identifying student actions that represent improper driving, (2) identifying cause of student's improper driving, and (3) explaining what student should do to correct or improve driving performance (where necessary). YES NO Not Applicable

Comments:

9. Provides student driver with opportunity to practice maneuvers that need improvement. YES NO Not Applicable

Comments:

10. Provides student driver with opportunity to identify and make suggestions for correcting and improving driving mistakes. YES NO Not Applicable

Comments:

11. The candidate instructor evaluates the student's performance by reviewing the major points for improvement and how these improvements will be practiced. YES NO Not Applicable

Comments:

FINAL GRADE: ________

LESSON 12: Evaluation of Behind-the-Wheel Instruction and Course

Time: 1 1/4 Hours

Overview: In this final lesson have each in-car group (three candidates) meet with the master instructor to review the major problems each candidate encountered when teaching behind-the-wheel lessons. In addition, have each instructor lead discussion on the importance of (1) using good communication skills with students, (2) providing good demonstrations of driving maneuvers, (3) the need to vary teaching methods to meet individual student driver needs, and (4) providing appropriate feedback to the student driver. Stress that since learning to drive depends so heavily on the amount of actual practice of the skills and techniques involved, an efficient plan for the use of in-car time should be maintained.

Conclude the first part of the unit by answering general questions from the entire group. Remind them that they will be required to report to the (**high**) school during the initial teachers meeting on (**date**) at (**time**). Also, remind them that they should participate in the opening sessions of each classroom to be introduced and meet the students whom they will be teaching.

Finally, ask each candidate to complete the course evaluation form. Ask them to be honest and straight-to-the-point with their responses.

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Evaluation

Laboratory Aide Instructor Course

Please respond to each item. Your responses will help improve future courses.

1. Do you feel the course was worthwhile? Yes______ No______

   Comments:

2. How would you rate the format used in the course to organize and present the various lesson materials?

   Excellent ______ Good______ Fair ______ Poor______

3. In the space below please describe how you feel the course format indicated in item 2 could be changed in order to improve it and make it more useful for future courses.

   Comments:

4. What is the one major strength or thing you like most about the course? (Briefly describe that strength.)

   Comments:

5. What is the one major problem or weakness you observed in the course? (Briefly describe that problem.)

   Comments:

6. In the following space describe how you would correct the problem you identified in item 5.

   Comments:

7. How useful were the materials, films, and filmstrips presented and distributed in the various units of the course?

   Comments:

8. How would you rate the overall quality of in-car instruction you received?

Excellent ______ Good______ Fair______ Poor______

Comments:

9. Do you feel that you had enough time to teach the student driver for preparation of behind-the-wheel teaching?

Yes______ No______

Comments:

10. In the space below please describe how you feel in-car instruction could be changed in order to improve it and make it helpful for future courses.

Comments:

11. Do you feel you are prepared to perform the tasks necessary to teach behind-the-wheel instruction?

Yes______ No______

Comments:

APPENDIX

Resources

Films and Filmstrips

The following sources may provide additional films and filmstrips for use in this course. They may be obtained on a purchase, rental, or free loan basis.

AAA American Automobile Association
Traffic Engineering and Safety Department
8111 Gatehouse Road
Falls Church, Virginia 22042
or
Local affiliated clubs

AETNA Aetna Life & Casuality
Education Department
151 Farmington Avenue
Hartford, Connecticut 06115

FMC Ford Motor Company, Film Library
The American Road
Dearborn, Michigan 48121

GM General Motors Corp., Film Library
3044 West Grand Boulevard
Detroit, Michigan 48202

LM Liberty Mutual Insurance Company
Public Relations Department
175 Berkeley Street
Boston, Massachusetts 02117

ODE Ohio Department of Education
Division of School Finance
Driver Education Section
Ohio Departments Building
65. S. Front Street, Room 815
Columbus, Ohio 43215
or
Area coordinators' offices

ODHS Ohio Department of Highway Safety
240 Parsons Avenue
Columbus, Ohio 43205

OTSEC Ohio Traffic Safety Education Center
The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

SCI Safety Center, Inc.
25 Reservoir Avenue
Providence, Rhode Island 02907

Booklets, Pamphlets, and Posters

American Automobile Association
Traffic Engineering and Safety Department
8111 Gatehouse Road
Falls Church, Virginia 22042
or
Local affiliated offices

"Defensive Driving—Managing Time and Space"

American Family Insurance

"Highway Speeds—How Fast Is Too Fast? The Big Question!"

American Optometric Association
7000 Chippewa Street
St. Louis, Missouri 63119

"Driving Takes Seeing"
"I Didn't See"
"Open Your Eyes to Vision in Highway Safety"

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

"Automotive Safety Belt Fact Book"
"How Many of These Fairy Tales Have You Told"
"There Are Lots of Safety Belt Myths... Why Not Consider the Truths"

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